

USING LEARNING-THEORY-BASED TEACHING STRATEGIES
FOR TEACHING SINGING: AN EXPLANATORY SEQUENTIAL
STUDY OF COLLEGIATE TEACHERS OF SINGING

A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE

DOCTOR OF ARTS

BY

SUSAN E. SHIREL

DISSERTATION ADVISORS: DR. DON P. ESTER & DR. KEVIN W. GERRITY

BALL STATE UNIVERSITY

MUNCIE, INDIANA

MAY 2018

ABSTRACT

The purpose of this study was to explore the uses of learning-theory-based teaching strategies (LTBTS) by teachers of singing in colleges and universities for teaching singing. Using an explanatory sequential mixed methods design, the first quantitative phase used a researcher-developed questionnaire of Likert-type statements to assess participants' attitude towards, frequency of use, and perception of importance of using ten LTBTS when teaching singing. A link to the online questionnaire—"Effective Teaching Strategies for Teaching Singing"—was sent to 6,912 collegiate voice teachers and choral directors in the United States using the College Music Society's email distribution service. The sample ($N = 350$) was found to be representative of the population receiving the email through comparison of the percentages of individuals in CMS job title categories with similar primary and secondary teaching roles identified by participants. Results indicated participants viewed the use of LTBTS very positively but moderately important. In response to questions about how frequently respondents used each teaching strategy, responses indicated each strategy was used "most of the time," with breaking down repertoire into small chunks for mastery, providing high quality feedback, teaching students to be aware of their thinking about singing, and teaching deliberate practice strategies being used "always." Only weak and very weak correlations were found to exist between demographic characteristics and participants' attitude and importance scores, whereas an open-ended question suggested a potential disconnect regarding knowledge about LTBTS among teachers of singing and a lack of distinction between voice science and vocal pedagogy.

Based on the quantitative results, three respondents with diverse scores and demographic characteristics were selected to participate in phenomenological case studies. Through analysis of interviews, teaching observations, and the collected teaching materials, the following themes

emerged as descriptions of the participants' lived experiences of the phenomenon: *Observed Uses of LT BTS*, *Familiarity with LT BTS Terminology*, *Variety of Vocal Pedagogy Training*, *Differences in Defining Vocal Pedagogy*, and *A Desire to Be a Better Teacher*. Each of the case study participants confirmed the frequency of use and positive attitude; however, the case studies suggested the participants were not always aware of the use and did not have prior exposure to LT BTS specific terminology. A comparison of the two data sets implied a clarification was needed to distinguish vocal pedagogy from voice science in the field of voice teaching. Additionally, the researcher recommended developing a graduate voice educator degree that would combine the courses traditionally taught in a vocal pedagogy program with courses that would deliver information about the application of educational learning theories and cognitive science to teaching singing. Future research may provide additional information about how singing teachers are prepared for teaching at the collegiate level and how collegiate instrumental instructors may perceive the use of LT BTS for teaching applied music lessons.

DEDICATION

To my grandmother, Jane Elgin Meacham,
with whom I share so much more than a middle name.
If you were alive today, you would have just turned 100 years old
and would be telling anyone who would listen through your tears,
“That’s my granddaughter!”

ACKNOWLEDGEMENTS

While the researching and writing process associated with completing a dissertation are often done in isolation, this endeavor was not accomplished outside the context of community. I am blessed with many diverse communities who have helped to build the foundation for this work, encouraged me along the way, and empowered this “little project” to be completed in a concise timeline. I have a tremendous amount of gratitude for the following communities and specific individuals within those communities for their assistance in completing this degree.

To my committee members: Thank you for your support and guidance through this process. Each of you in your own way has played a vital role in its completion. As my voice teacher, Dr. Meryl Mantione, your patience and understanding through the challenges of being a student again helped me to accomplish more than I imagined I could. Dr. Kevin W. Gerrity, as a co-chair, you were instrumental in the development of the research methods and helped me find the words for the question I was asking. Thank you for giving me the courage to take the more difficult road because it was the path offering the clearer answers. To my other co-chair, Dr. Don P. Ester, words are not sufficient to express the amount of gratitude I have for you. As a teacher, you challenged me to use research-based evidence to explain my thoughts and experiences. As a mentor, you acknowledged my experiences were a filter that caused me to think like a teacher even when I was the student and as a result were the first to offer collegiality. As a friend, you recognized my struggles and offered grace and kindness. If I can be a fraction of the educator you are, I know my students will be blessed just as I have been blessed by working with and knowing you.

To the case study participants: Thank you for generously sharing your thoughts, experiences, and studios with me. You were truly co-researchers through this process and I am grateful for the resulting friendships. May our paths cross again soon!

To the Ball State University Music Education Faculty: I am immensely grateful for your acceptance of me as both a student and colleague. You have inspired me through your friendship and scholarship. Thank you for allowing me to be a small part of the impact you have on future music educators. I am particularly grateful for the camaraderie found in the MU 409 hallway. Ann, Debbie, and Ann, thank you for being generous with your time, always being willing to listen, and being the best cheerleaders. I needed that more than I have words to express!

To Harding University: Thank you for providing a three-year academic leave to complete this degree. This is a gift I have not taken for granted and I eagerly anticipate being able to pay this gift forward to future students. It truly is great to be at Harding! Kelly and Julie, thank you for taking the time to listen, for helping me stay connected while being away from Searcy, and for offering words of encouragement along the way. Stacey Neely, thank you for stepping in to fill in the gaps during these three years. I know it was hard, but I cannot think of anyone more capable than you to have done it and am honored you were willing to make the many sacrifices it required. Love, love you, my dear friend!

To my church family: Thank you for being the connection to what is most important and a reminder of the source that makes all of this possible. Some of you, like Dan, Cindee, Mike, and Kista, offered emotional and spiritual support when I needed it most. Mary Ann, you generously took the time to help me understand the statistics and provided feedback for the entire document. Thank you for that amazing gift! Amy, my dear friend, you pulled me out of my

tunnel vision and offered much needed distractions like shopping or playing with little Luke. I am grateful for God's providence that has turned us into sisters.

To my former teachers, students, and colleagues: I am grateful for the things each of you have taught me. This research is truly a reflection of your impact on my life.

To my family: I love you! Thank you for teaching me what it means to love like Jesus, to get back on the horse whenever you fall off, and that a strong work ethic is worth the effort. Look, Mom and Dad! All of those years of music lessons ended up being a great investment! I could not have made it through this without you! Thank you!

Above all else, I am grateful to God for giving me more than I deserve, carrying me through the tears, and being the reason I can always sing with joy! Great is thy Faithfulness!

Ephesians 3:20-21 – Now to him who is able to do far more abundantly than all that we ask or think, according to the power at work within us, to him be glory in the church and in Christ Jesus throughout all generations, forever and ever. Amen. (ESV)

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CHAPTER ONE

INTRODUCTION

The Research Problem

The act of teaching is complex and requires a broad knowledge base. To effect student learning and achievement, instructors must have a fundamental understanding of the subject matter being taught, an awareness of the processes of learning, and the ability to use pedagogically-based teaching strategies. As a result, teacher education and state licensure programs often require a combination of competencies in the areas of content knowledge, fundamental principles of learning and teaching, and content-area-specific pedagogical strategies. Understanding all of these areas provides a creative teacher with a rich toolkit to meet the diverse instructional needs of each student under her tutelage.

Music making and music teaching can also be described as complex activities. The complexity is evidenced in the breadth of knowledge studied in collegiate music programs, such as music theory and composition, music history, performance studies on an instrument, ensemble performance, and methods for teaching music. Like teacher education, the training of individuals who teach music seeks to develop competencies in both musicianship skills through individual performance and the tools for transmitting musical skills in a general music classroom or ensemble setting. An exemplary music educator may then be described as one who is knowledgeable and capable as both a performer and a teacher—one who is able to both model the craft and train others to be competent musicians.

Not all music teaching occurs in a music classroom or ensemble setting. Private music lessons are an integral component of music education, particularly at the collegiate level. Music teaching in an apprenticeship setting relies on skilled performers to transfer knowledge of how to

perform on a specific instrument. Training for the applied music teacher often begins either as a performer or P-12 music educator (Parkes, 2009). Parkes identifies a disjuncture when acknowledging the differences between the roles of performer, teacher, and educator often required of collegiate faculty. For the person who began as a performer, the experience of being a voice student may equip the individual with the content knowledge of what to teach; however, the experiences as a voice student will not necessarily provide insights into how to teach applied voice lessons. When the performer takes on the role of teacher, the teaching strategies used may be learned “through trial and error” rather than as a result of learning-theory-based teaching practices (Parkes, 2009, p. 71). Therefore, the applied voice teacher who began as a performer is likely to have demonstrated competency in content knowledge and pedagogical strategies specific to singing but may have limited awareness of the processes of learning.

An examination of the content found in several vocal pedagogy texts further reveals a disjuncture between the pedagogy-of-learning and the pedagogy-of-singing. In *The Functional Unity of the Singing Voice*, Doscher (1994) takes a scientific approach to explaining vocal pedagogy and describes the purpose of this book as providing an understanding of “the anatomy and physiology of the breathing and phonatory mechanisms and the acoustical laws necessary for an understanding of resonance, with the intention of establishing their functional unity” (p. ix). McKinney’s (2005) guide for voice teachers and choir directors, *The Diagnosis and Correction of Vocal Faults*, focuses on identifying and correcting common vocal errors. Similar to the approach used by Miller (2004) in *Solutions for Singers: Tools for Performers and Teachers*, McKinney provides recommendations for effecting change in a singer’s voice by using modeling and repetition strategies, but the rationales for why these learning strategies may be effective are not discussed in either text. In *Vocal Technique: A Guide for Conductors, Teachers, and Singers*,

Davids and LaTour (2012) present a comprehensive view of the physiological and phonological aspects of singing in a sequence of instructional focus: posture, breathing, onset, resonance, vowels, and consonants. While this approach is less scientific than the previous texts, Davids and LaTour also provide little information regarding how individuals learn. Although not explicitly a vocal pedagogy text, Smith and Chipman (2007) base *The Naked Voice: A Wholistic Approach to Singing* on Smith's experiences as a prominent voice teacher and describe an approach to singing that views psychological and spiritual aspects of singing as important as the physiological.

Of the vocal pedagogy texts examined, several texts address to varying degrees the issue of how to teach as implied by vocal pedagogy. Caldwell and Wall (2001), authors of the *Excellence in Singing* series, acknowledge that voice teachers should have an understanding of the learning process by spending several chapters in volume one explaining the stochastic process: a discovery method exposing a student to a random element filtered through a teacher-provided mechanism producing a corresponding result. Similarly, Ware (1998) offers significant insight into pedagogical concerns in his book, *Basics of Vocal Pedagogy: The Foundations and Process of Singing*. A chapter devoted to "Teaching Singing" covers a variety of topics, including a history of vocal pedagogy approaches, the roles of a voice teacher, the structure of the teaching process, and specific concerns of teaching a diverse age range of students. The author also addresses motivational issues in the chapter titled, "Psychology of Singing" but does not present specific research-based teaching strategies in either section of the text. With a lack of content-specific literature regarding learning-theory-based teaching strategies (LTBTS) for teaching singing, the question becomes "How do teachers of singing learn about how humans learn?"

The lack of training in methods of teaching for applied music teachers was discussed at a pre-conference session titled “Training the Singer and the Teacher: Charting a Course for the Future” held at the 2016 National Conference of the National Association of Teachers of Singing in July 2016. The session panel, consisting of six experts from various areas of the field of voice, discussed the major struggles each person saw facing the field of classical singing. While some panelists focused on the training of singers to be professional performers, other panelists focused on the preparation of the teachers of singing. The discussion further acknowledged Doctor of Musical Arts degrees, typically held by collegiate voice teachers, as frequently being performance degrees, which may or may not have a teacher-training component to equip future teachers with the knowledge of LTBTS. Since LTBTS are often required knowledge of P-12 music educators, the panel encouraged a more open dialogue between the areas of classical voice, music education, and choral conductors for the purpose of benefiting all student singers and future teachers of singing.

Researchers in music education have recognized the need for research into applied teaching for nearly thirty years. In his MENC (now NAfME) Senior Research Award Acceptance Address, Madsen (1988) identified applied music study as the first area needing research attention “before we can expect research to have the influence it deserves” in the field of music education (p. 134). Kennell (1992) suggested the limited amount of applied music research could be attributed to the paradigm focus of the performance community and its “oral tradition in which personal experience and historical anecdote form the basis of contemporary common practice” (p. 5). Ten years later, Kennell (2002) continued to acknowledge a lack of research in this area as being problematic for connecting theory with practice. Reviewing research from 26 countries over the previous 60 years, Jørgensen (2010) noticed a narrower

range of research into higher education music institutions and called for the labeling of research into music education in higher education as a distinct category from K-12 music education. With Jørgenson's appeal and the prevalence of applied voice instruction in higher education, it is understandable to find little research specific to the field of collegiate teachers of singing.

Although not specific to voice teaching, the existing research regarding applied music teaching also supports the need for further investigation into best practices for applied music lessons. An early study by Abeles (1975) sought to develop an evaluation tool for applied lessons, while Schmidt (1989) investigated the relationship between Myers-Briggs personality types and teaching behaviors. In a study exploring the perceptions of higher education applied lesson instructors in the UK regarding individual instruction, Gaunt (2008) found common themes such as a lack of formal training and a feeling of isolation from the other instructional environments in which the students participate. In two linked studies, Duke and Simmons (2006) and Parkes and Wexler (2012) worked to identify characteristics common among six different applied instrumental teachers; they also recognized the limitations of the location and sample size as the experience of the teacher and skill level of the student likely impacted the frequency of the found common characteristics. By contrast, McPhail (2010) used action research in an attempt to synthesize experiences in both the music education classroom and private studio. The researcher discovered the value of using questioning techniques and providing specific feedback in effecting change in student performance.

Limitations of the aforementioned research studies lie in the unknown applications in the voice studio, the focused attention on common characteristics, and the lack of research about the uses of LTBTs by voice teachers. Further research is needed to identify to what extent teachers of singing are knowledgeable about learning-theory-based teaching practices and how teachers

of singing may already be using these strategies. A benefit of this research may be to expand the knowledge base in research-based approaches of teaching singing and, ultimately, increase student learning. A mixed methods research design allows for the creation of a combined description of the general population of collegiate teachers of singing and a rich picture of lived experiences of representatives from differing points on the perceptual spectrum. By more fully examining how collegiate teachers of singing use and perceive the use of LTBTs, awareness can be added of the extent to which information has been shared between the disciplines of voice and music education. The potential implications of sharing LTBTs—often associated with music education—with applied voice teachers would be to offer additional student-centered approaches of teaching voice, provide instructional strategies for teaching diverse students, and inform curriculum used to train future teachers of singing and other areas of applied music performance.

Definitions of Learning-Theory-Based Teaching Strategy Terminology

Since Learning-Theory-Based Teaching Strategies are rarely explicitly discussed in the context of teaching singing, several terms needed to be defined. For the sake of this study, *collegiate teachers of singing* or *teachers of singing in colleges and universities* referred to both choral directors and applied vocal performance teachers in the university or college setting. Both types of teachers of singing were included as each traditionally receives training in how to teach people to sing and the common job responsibilities for each type include teaching singing to a greater or lesser degree. *Applied music teaching* was defined as instruction most often occurring using an apprenticeship or expert/student model with the goal of learning to perform on a specific musical instrument, including the human voice. Applied performance instruction and private studio lessons were also used to refer to the phenomenon of applied music teaching. With

the focus of this study being the uses of LTBTs for teaching singing, the phrase *Learning-Theory-Based Teaching Strategies* meant the instructional strategies with demonstrated effectiveness based on theoretical constructs of how humans learn. Three distinct theoretical approaches—behaviorism, cognitivism, and constructivism—provided a framework for organizing specific LTBTs strategies and terminology.

Based on the research of Watson, Pavlov, Thorndike, and Skinner, a Behaviorist view of learning focuses on the development of new behaviors through the conditioning of a stimulus to produce a specific response. Concepts of association and reinforcement are key to this conditioning process. The application of these principles can be found in the repetitive nature of practice commonly used for acquiring musical skills. Thorndike's law of exercise reasons that as the frequency of the stimulus-response experience increases, the strength of association becomes stronger (Taetle & Cutietta, 2002). As such, practice in music becomes a highly repetitive series of stimulus-response exercises. Ericsson, et al. (1993) described *deliberate practice* as “those activities that have been found most effective in improving performance” (p. 367). In music, such activities may be divided into categories designed to build technique, learn music, or develop expressive qualities. Another useful behaviorist strategy is *priming*, referring to the effect of a faster recall time as a result of a prior exposure. Through repetition or associations with other information, priming helps a student to be able to perform a new task with greater efficiency through stronger encoding of information.

Cognitivism, on the other hand, considers the thought processes used by a learner in the learning process. Bloom (1956) ordered a sequence of cognitive tasks from lower to higher complexity into a Taxonomy of Educational Objectives within the cognitive domain. *Higher-order thinking* engages students in cognitive activities from the top four taxonomy levels,

specifically tasks of application, analysis, synthesis, and evaluation [later revised by Anderson, Krathwohl, and Bloom (2001) to apply, analyze, evaluate, and create]. Intentional focus on cognitive tasks through self-reflection or self-analysis of instructional task performances becomes a useful tool for impacting change from a cognitivist perspective. This process, labeled as *metacognition*, refers most simply to thinking about one's own thinking. Cognitivist learning strategies in applied music lessons might include the use of questioning to help students problem solve in a lesson or in reviewing a personal performance video to analyze areas of improvement and future growth.

The constructivist viewpoint is grounded in the developmental psychology theories of Piaget. A constructivist considers learning to be the construction of schema or organization of information by the learner through lived experiences, either as an individual (psychological constructivism) or as part of a group (social constructivism). Since applied music learning occurs in an apprenticeship setting, the teacher continually provides *feedback* as a response to a student performance of an instructional task. As the teacher and student engage in a cycle of student performance followed by teacher feedback, this collaborative construction of growth reflects a social constructivist perspective.

The social constructivist, Vygotsky, offers two other applicable teaching strategies for applied music instruction. *Scaffolding*, as described by Kennell (2013), is “a metaphor for how the teacher serves to support the student in interaction: *A scaffold is temporary. It is used to reach beyond your current capabilities. It is removed when no longer needed*” (p. 130). While scaffolding refers to the instructional support systems provided by the teacher, Vygotsky also identified the phenomenon from the student perspective as the zone of proximal development (ZPD). In seeking to describe a theory of applied music instruction, Kennell (1992) defined

Vygotsky's *zone of proximal development* as “a region of potential action just beyond the student's current capabilities and accessible to the student only with the assistance of a capable teacher” (p. 14). When combined, intentional use of scaffolding to help students navigate a ZPD may describe effective applied music instruction.

Philosophical and Theoretical Foundations

A frequent critique of conducting mixed methods research is a perceived irreconcilable philosophical tension between quantitative and qualitative research paradigms. The postpositivist quantitative perspective that focuses on using detailed measures of variables to verify a theory would seem to be incompatible with the constructivist perspective of qualitative research. To address this tension, Creswell (2011) suggests pragmatism may be a better fit when conducting mixed methods research because it allows for the use of multiple perspectives determined by the chosen research design and priorities. Additionally, pragmatism allows the strengths of each research paradigm to remain intact during the corresponding phase, while prioritizing the research question over method. The flexibility found in the pragmatist viewpoint is crucial in allowing the researcher to shift between postpositivist and constructivist perspectives during the course of the study. Creswell further states there is an advantage of using a pragmatist worldview when conducting mixed methods research, “because it enables researchers to adopt a pluralistic stance of gathering all types of data to best answer the research questions” (p. 46). By utilizing the strengths and minimizing the weaknesses of each research method, the use of pragmatism in the current mixed methods study helped the researcher to expand the overall scope of the study.

With a postpositivist worldview prescribed for the initial quantitative phase of this study, the inclusion of a second qualitative phase required the identification of any theoretical lenses

used to analyze the topic. Since the intent was to provide a rich description of how teachers of singing use LT BTS for teaching singing and the experiences or influences impacting the perceptions and uses of LT BTS for singing, applying a phenomenological lens to the case studies allowed the researcher to examine the phenomenon—in this case, the uses and perceptions of LT BTS—from the perspectives of three individuals representing three diverse experiences. Hourigan and Edgar (2014) suggest an implication of the philosophy of phenomenology for research is found in the assumption of the human ability to know only what has been experienced. As such, “phenomenological research is the attempt to study the essence or nature of the lived experience through the eyes of human existence” (p. 149). Through examining individual lived experiences, common themes were then identified to explain a possible disjuncture between the perceived and actual uses of LT BTS for teaching singing.

Purpose of the Study and Research Questions

The intent of this study was to explore the uses of learning-theory-based teaching strategies (LT BTS) by teachers of singing in colleges and universities for teaching singing. Using an explanatory sequential mixed methods design, the first quantitative phase utilized a researcher-developed questionnaire to describe the perceptions of collegiate teachers of singing towards the use of LT BTS for teaching singing. In the second qualitative phase, three phenomenological case studies of questionnaire respondents were conducted in order to further explain the quantitative results. In the explanatory follow-up, the lived experiences of each participant were explored to determine how the participant used LT BTS to teach singing, the ways in which the participants had become familiar with applications of LT BTS for teaching singing, and what experiences and training may have impacted participant perceptions towards

LTBTS. Interviews and teaching artifacts were used to explain potential differences between observational and perceptual data. The general research question guiding each phase and the integration of data were as follows:

1. What are the perceptions of collegiate teachers of singing towards the use of learning-theory-based teaching strategies for teaching singing? (Quantitative)
2. How do collegiate teachers of singing use learning-theory-based teaching strategies to teach singing? (Qualitative)
3. In what ways do the qualitative data describing the uses of learning-theory-based teaching strategies by collegiate teachers of singing help to explain the quantitative results about perceptions reported on the questionnaire? (Mixed Methods)

Significance of the Study

By using a mixed methods design for this study, the phenomenon of how collegiate teachers of singing use LTBTS was examined in a broader scope. The description of the perceptions held by collegiate teachers of singing towards LTBTS helped to identify what teaching strategies were perceived to be the most useful to or considered irrelevant by individuals currently teaching. A benefit of this data may be to offer additional student-centered approaches of teaching voice and provide instructional strategies for teaching diverse students. In the qualitative phase, an understanding of the lived experiences leading to the use or lack of use of LTBTS allows the voice teaching profession to gain empirical insights into the ways teachers of singing are exposed to knowledge about how people learn. Two possible implications of these insights were to determine the extent to which information had been shared between the disciplines of music education and voice and to inform the ways in which future voice teachers

are trained. Through the combination of data in this mixed methods study, the significance of this research became the expansion of the knowledge base in research-based approaches of teaching singing and, ultimately, the potential for increasing student learning.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Specific research studies about the use of LTBTs for teaching singing were difficult to find. As a result, the researcher focused on finding research with broad applications and then narrowing the focus to areas relating specifically to the collegiate applied music lesson. Similarly, educational research is rarely identified as examining “learning-theory-based teaching strategies.” As such, research studies regarding relevant learning-theory-based strategies were identified in the following categories from the areas of educational research and music education: (a) feedback, scaffolding, and the zone of proximal development; (b) higher-order thinking and metacognition; and (c) general practice, repetition, and deliberate practice. Additionally, research was found describing music teaching styles and effective music teaching strategies in K-12 education. Finally, research specific to the higher education setting of applied music teaching was included regarding the following topics: the relationship between teaching behaviors and teacher personality types, the impact of providing teaching training for undergraduate performance students, the characteristics common among effective applied lesson teachers, the role of rapport between the student and teacher in a studio lesson environment, and a measurement of the self-efficacy of collegiate applied music performance instructors.

Learning-Theory-Based Teaching Strategies in Educational Research and Music Education

Without research explicitly exploring the topic of learning-theory-based teaching strategies (LTBTs), the researcher focused on examining studies of applicable teaching strategies for teaching singing developed out of behaviorist, cognitivist, and constructivist

learning theories. Such strategies included practice techniques, questioning, self-evaluation, types of feedback, scaffolding, and the student's zone of proximal development. Because the learning theories provide a clear delineation between types of teaching strategies, research studies on LTBTs are grouped by the associated learning theory in this section of the literature review. Additionally, studies conducted in general educational settings or non-musical content settings are presented prior to studies specific to music education for teaching strategies under each learning theory. The following section provides an overview of the effective uses of LTBTs in both non-musical and musical educational settings.

Behaviorism: Deliberate Practice, Priming, and Practice Pedagogy

Behaviorism proposes the learning process is a result of the conditioning of a stimulus to a specific response. According to Thorndike's Law of Exercise, practice strategies strengthen the association between the stimulus and response through repetition. Deliberate practice makes use of focused practice strategies rather than allowing the student to free play or practice without guidance. Three studies by Ericsson, Krampe, and Tesch-Römer (1993) examine the role of deliberate practice in expert performance. Priming of a response may also be used to give a student exposure to information as a means to quicken a future stimulus response. Trofimovich and Gatbonton (2006) examine the effectiveness of priming for second language acquisition. As practice is a repetition of previously learned stimulus responses, four chronological studies demonstrate the way an instructor chooses to teach a student to practice often varies.

Ericsson, Krampe, and Tesch-Römer (1993) described a pivotal theoretical framework for understanding the function of deliberate practice in developing expert performance. The framework was developed using the following assumptions: the presence of an expert mentor or

teacher, the amount of deliberate practice is impacted by physical and mental limitations, and the deliberate practice process lacks pleasure. Previous research had identified a minimum of ten years of experience was necessary for developing exceptional performance across many disciplines (Gustin, 1985; Hayes, 1981; Kalinsowski, 1985; Krogius, 1976; Monsaas, 1985; Simon & Chase, 1973; Sosniak, 1985; Wallingford, 1975). Based on this research, the first study was designed to measure the levels of deliberate practice previously and currently used by three groups of adult violinists. The three groups were current students at the Music Academy of West Berlin. The ten participants in the top-tiered group were considered by faculty highly likely to have successful performance careers, a second group of ten was considered to be good performance students, and a third group consisted of students planning to be music teachers. The sample was stratified to represent similar demographic characteristics for each of the three-tiered performance levels. Each participant participated in three individual interviews in which demographic information, past and current practice habits, and practice preferences were collected. A 24-hour diary was also filled in for an entire week to document the ratio of practice versus non-practice activities engaged in by each participant.

Results of the first study by Ericsson et al. (1993) were consistent with the proposed theoretical framework. Of the practice activities, practicing alone received the highest relevance rating from 27 of the 30 participants. All three groups also had similar ratings for effort and pleasure for the variety of practice activities, indicating all three groups viewed practicing as requiring significant effort with little enjoyment. Sleep was also rated as highly relevant for improvement of violin skills. The researchers suggested this might be connected to the amount of effort expended during practicing and the need for physical recovery. In regards to the amount of time spent practicing each week, the top and middle groups were found to engage in nearly

identical amounts of time, equaling almost three times more practice than the teaching group. Similarly, the amount of accumulated practice-alone time up to age 18 for each group was proportional to the perceived skill level of the group, meaning the higher level of expertise positively correlated with a higher amount of accumulated practice alone.

Seeking to supplement the previous study, Ericsson et al. (1993) recruited twelve expert and twelve amateur pianists to “obtain experimental measures of performance in skill-related tasks that could then be related to measures of current and accumulated practice” (p. 381). In two sessions at least a week apart, the participants engaged in a series of musical and non-musical skill tests, including response time and a musical performance. In between the two test sessions, participants completed the same 7-day diary with coding activity as in the previous study. Results showed a significant difference in the amount of practice-alone time between the expert and amateur groups: 26.71 and 1.88 hours per week respectively. The estimated amount of weekly practice up to age 18 was also significantly different between the two groups, as demonstrated by the estimated 7,606 accumulated hours for the experts versus 1606 hours for the amateurs. The hypothesis of skills acquisition through deliberate practice was also confirmed by the lack of a difference on non-musical performance tasks and a significant difference in musical performance related tasks between the two groups. As a result, the researchers advocated that expert music skill acquisition was a result of gradual development over time through deliberate practice rather than solely a result of inherited traits.

Looking to find the effectiveness of priming strategies for sound-based learning, Trofimovich and Gatbonton (2006) examined the use of repetitive practice for learning distinct phonological characteristics of a second language. In the first of two distinct experiments, two groups of 10 third-semester, college-age Spanish students—a low accuracy pronunciation group

and a high accuracy pronunciation group—participated in two sequences of individual testing. The first sequence of testing, conducted in English, included a study period of listening to 46 words (36 study and 10 filler words), a distracting math activity to clear short-term memory, and a test activity involving listening to and repeating 80 (72 test and 8 filler words) words as rapidly and accurately as possible. Of the 80 test words, 36 were repeated from the study period. The second testing sequence was identical to the first, except with Spanish words. Scores indicated:

The higher-accuracy learners were overall significantly faster at initiating the production of all words (both repeated and unrepeated) than were the low-accuracy learners, that all learners were overall significantly faster at initiating production in English than in Spanish, and that all learners were significantly faster at initiating the production of repeated words than of unrepeated words (thus demonstrating word-priming effects). (p. 523)

The second experiment of the study by Trofimovich and Gatbonton (2006) expanded the participants to 20 participants in each of the high- and low-pronunciation accuracy groups, but participants were also randomly assigned to one of two treatment groups: focus on form (FonF) or focus on meaning (FonM). In order to examine the effects of repetition when asked to attend to meaning, an additional task of rating word pleasantness or accuracy of pronunciation was added to the procedures of the previous study. Results found the repetition of words impacted the speed of production for the FonF group in both languages and both accuracy levels. The FonM group had differentiated results, with the high-accuracy group responding more quickly than the low-accuracy group for repeated words. The results suggested repetition was an effective instructional strategy even though attentional focus may impact the benefits of word priming through the repeated exposure to words.

With the established effectiveness of deliberate practice for acquiring expert skills and the usefulness of priming for improving the speed of a response, the next series of studies examined the practice strategies taught and used in the study of music. Barry and McArthur (1994) surveyed members of the Music Teachers National Association to determine what and how practice strategies are taught in applied music lessons. Participants ($N = 94$) completed the Music Practice Instruction Inventory (MPII) consisting of 26 items with a five-point Likert-type response scale and answered demographic questions. Of the respondents, 55.3% indicated teaching only pre-college students and 41.5% indicated teaching college or university level students at least part time, while nearly all respondents reported teaching piano. Results of the survey instrument indicated the majority of participants always or almost always discussed the importance of practice and specific practice strategies with students. Other item responses were varied, indicating a diversity of approaches to teaching students how to practice among participants. Comparisons between pre-college and college teachers resulted in significant differences for ten of the items. Barry and McArthur offered three possible explanations for this finding: the assumption of college students already knowing how to practice, the more advanced cognitive abilities of older students to utilize mental practice strategies, and the increased parental involvement for younger students.

While the previous study focused on the practice strategies taught, the next study examined the practice strategies most frequently used by upper-level students. Using graduate and advanced undergraduate piano performance and piano pedagogy students, Duke, Simmons, and Cash (2009) sought to describe the practice habits of advanced music performance students and determine the extent to which those habits might predict the performance of a difficult passage 24 hours later. The seventeen participants were given an unlimited amount of time to

practice the prescribed passage and given instructions to practice “until you feel that you have learned it well and can play it confidently at the target tempo (120 bpm) without the metronome” (p. 312). The practice sessions were recorded, as were the retention test performances the following day. For data analysis, time totals, number of complete trials, and the number of varying degrees of accurate performances were recorded for each participant. A set of eleven rehearsal behaviors were also identified in the recordings and agreed upon by the three researchers. Results identified three participants whose retention tests received significantly higher scores than the other participants. These top-ranking participants utilized nearly every rehearsal behavior identified by the researchers but did not represent the longest times spent practicing. Based on these results, the researchers suggested the quality of the practice strategies used had a greater impact on retention than the length of time spent practicing.

Attempting to identify the most effective practice strategies, Sikes (2013) used a convenience sample of 40 university string players at a major research university. Participants were asked to sight read an excerpt, given ten minutes to practice using an assigned practice strategy, and then asked to perform the excerpt again. The four assigned practice strategies were free practice, playing slowly and then speeding up, repeating individual chunks of the excerpt, and playing the whole excerpt multiple times. Three experienced string teachers rated pretest and posttest performances with an acceptable interjudge reliability ($r = .87$). Although no significant differences were found between the practice strategies, results demonstrated improved posttest scores for all four of the practice strategies. The researcher hypothesized the advanced experience and performance level of the participants may have impacted the outcome of the study. Since free practice was as effective as guided practice strategies in this study, Sikes stated:

Advanced musicians can be left to their own devices to practice, with a reasonable expectation that they will improve as much as if they were using one of the other targeted strategies, at least in the first 10 min of learning a piece of music. (p. 329)

Finally, Baughman (2015) explored the perceptions of collegiate voice teachers regarding the practice strategies taught to students in voice studios. Voice teachers from the central region of the National Association of Teachers of Singing who teach at National Association of Schools of Music accredited institutions were asked to complete an online questionnaire. The survey instrument included four sections that used a mixture of open response and Likert-type scale questions to gather data about respondent demographics, how the respondents assess student musical growth, the frequency of practice strategies taught, and the personal perceptions towards the strategies. In the analysis of data, practice logs and journals were identified as most commonly used for tracking student progress. Setting short-term goals and practicing difficult passages were the most valued strategies, while the discussion of practice strategies in lessons was found to be the most frequently used method of teaching students how to practice. Because the researcher did not find any specific trends to describe a standard method of how voice teachers teach students to practice, recommendations for further research were made, which included observing lessons to determine the frequency of strategies taught and monitoring student practice to determine the degree to which the students use the strategies.

In summary, the research regarding the use of behaviorist teaching strategies in teaching music demonstrates the repetitive nature of practice as being critical for developing the skill level associated with collegiate singing. Although the methods and approaches for teaching students how to practice were varied in the research, Ericsson et al. (1993) provided support for the

usefulness of teaching students deliberate practice strategies. While the research supports the use of deliberate practice, the research did not identify how or why a disjuncture exists between the perceived value of deliberate practice strategies, the usefulness of priming in lessons, and the inconsistencies in approaches to teaching students to practice. Future examination of the disjuncture would provide insights for informing the training of future teachers of singing.

Cognitivism: Higher-Order Thinking and Metacognition

Cognitivism focuses on the cognitive processes used by the learner in the learning process. As such, cognitivist teaching strategies seek to engage the learner in progressively complex levels of thinking and to train learners, at the appropriate developmental level, to employ metacognition or become aware of how she thinks about her thinking. Bloom's Taxonomy of Education Objectives (1956) within the cognitive domain and the Revised Taxonomy of Anderson and Kratwohl (2001) provide the framework used for defining categories of cognitive tasks by difficulty level and create assignments of cognitive tasks to lower-order or higher-order thinking. The following research assesses these cognitivist strategies of metacognition and higher-order thinking in both non-musical and musical educational settings.

Examining the metastrategic knowledge (MSK) of teachers, Zohar (2006) investigated the types of knowledge required for using MSK to teach higher-order thinking in the classroom and the feasibility of developing these skills through professional development. The participants consisted of 14 junior high and high school science teachers who attended a three-phased professional development course over six months. Data collection included two classroom observations per participant, two semi-structured interviews, a transcript of the discussions during the course, and two examples of written work (a teaching self-reflection and a lesson

plan) per participant. Emerging themes from the entire group were analyzed using grounded research principles and the experiences of two of the teachers were further described as detailed case studies. The researcher found the pedagogy of teaching metacognition to students was unknown by the teachers prior to taking the course. By the end of the course, participants were observed using the language of thinking more frequently and were more aware of how the students were being taught to engage in higher-order thinking.

With increased pressure to demonstrate educational quality, Renaud and Murray (2007) conducted a series of three studies to determine the validity of using the frequency of higher-order questioning as an indicator of instructional quality in higher education. The first study performed by the researchers used a split-plot design with three sections of an undergraduate educational psychology course. Three exams containing critical-thinking questions were administered covering two chapters each. Prior to each exam, students ($N = 131$) were given an assignment for each chapter: one chapter assignment contained six lower-order thinking questions, while the other chapter assignment contained two higher-order thinking questions. Data analysis found significantly higher scores for the exam questions correlating to the higher-order assignments only for the first exam. Exam scores for questions related to the higher-order and lower-order assignments were not statistically different. The researchers proposed these results might be explained by the modifications students made to study habits following the first exam, the busier time of the semester for the latter two exams interfering with the students' ability to prepare, or the difficulty of isolating the dependent variable in a field test.

In the second study of the series, Renaud and Murray (2007) utilized a pretest-posttest experimental design to measure the impact of higher-order thinking questions on critical thinking. In a controlled setting, participants ($N = 95$) from a first-year undergraduate

psychology course took a parallel pretest and posttest, which included measurements of general critical thinking and specific psychology content. In between the pretest and posttest administration, participants were given a passage on personality theory to read along with either four higher-order thinking review questions (treatment group) or eight lower-order thinking review questions (control group). The difference between scores were analyzed, revealing significantly higher gain scores for the content specific questions of the treatment group, with 7.9% of the variance accounted for by the treatment. The researchers also found these results to be positive “given that one could expect only a small effect under the restricted conditions of this experiment, namely minimal exposure to the independent variable in such a short time frame (less than 2 hours)” (p. 337).

The third related study by Renaud and Murray (2007) was conducted using twenty-four courses across a variety of disciplines from the same university as the two previous studies. Students in these courses ($N = 781$) completed parallel forms of an abbreviated version of the Watson-Glaser Critical Thinking Appraisal (WGCTA) as a pretest and posttest. Instructors for the courses also provided the researchers with all materials used during the course. Questions were coded for lower-order and higher-order thinking based on Bloom’s taxonomy, and frequency of each type of question was determined for each course. Data analysis found a significant positive correlation between the frequency in higher-order thinking questions and gains in critical thinking scores, “with frequency of use of higher-order questions accounting for 17.8% of the variation in critical thinking gain scores” (p. 342). Combining the results of these three studies, the researchers stated that the use of higher-order thinking questions, as an instructional tool in higher education, was likely a valid indication of improved critical thinking skills. When used along with other student outcome indicators, such as the amount of feedback

provided to students, Renaud and Murray further suggested higher-order thinking questions might offer a useful measure of instructional effectiveness in higher education institutions.

Michalsky, Mevarech, and Haibi (2009) investigated the effects of metacognitive instruction shared with 4th grade students at different moments of a scientific reading instructional activity. In a quasi-experimental pretest-posttest design, the students (N = 108) were assigned to one of three treatment groups or a control group to receive metacognitive instruction before, during, or after reading a scientific text. Results indicated that the students receiving no metacognitive instruction exhibited the least amount of gain between the pretest and posttest. Of the three treatment groups, the after-reading group demonstrated the most growth in all categories, including science literacy, describing phenomena, formulating hypotheses, identifying dependent and independent variables, and reporting results and drawing conclusions. The researchers suggested these results might be a result of the age of the participants and the students' abilities to engage in cognitive and metacognitive activities at the same time. Additionally, the researchers hypothesized the students receiving metacognitive instruction after the initial reading were able to focus on understanding the text during the first read and then utilize metacognition during a rereading of the text.

Examining the influence of the use of problem-based learning (PBL) on developing metacognition, Downing, Kwong, Chan, Lam, and Downing (2009) compared the metacognitive skills of two groups of first-year undergraduate students (N = 66) at the beginning and end of the year using the Learning and Study Strategies Inventory (LASSI). One group of students participated in an academic program that makes use of a problem-based approach to teaching and learning; the academic program of the second group utilized more traditional teaching and learning methods. Compared to the non-PBL group, the PBL group scored significantly higher

on the posttest and netted a higher positive change in the final score for all categories: self-regulation, skill, will, and an overall score. As explanation for these results, the researchers stated:

Metacognition and self-reflection will develop first as a skill before it can be used as a series of consciously controlled strategies and this is precisely what a well-defined and carefully planned problem-based curriculum does. It forces the student into partially unfamiliar territory creating the context for skill development provided appropriate scaffolding and support is available. (p. 619-620)

This statement also alluded to the impact of the learning environment and the role of the teacher's ability to lead problem-based learning activities, which was not examined as part of this study.

The purpose of a study by Ibabe and Jauregizar (2010) was to explore the relationship between the use of online self-assessment tools for developing metacognitive skills and students' overall academic performance in a first-year undergraduate course required for psychology majors. Students in the course ($N = 116$) were provided with instruction regarding how to use the online self-assessment tool made available to students following each unit of study for voluntary use outside of class time. Students were also asked to complete questionnaires before and after each unit to measure the students' perceived learning. Two additional questionnaires were administered to measure student motivation and the degree of satisfaction with the online self-assessment tool. Results indicated a positive correlation between an increased use of the self-assessment tool and overall academic performance as measured by the final course grade, meaning the students who received higher grades were more likely to have used the self-assessment tool. While the least motivated group was found to use the tool less than the most

motivated group, nearly 50% of the least motivated group of students took advantage of the self-assessment tool. In regards to application, the researchers recommend the use of online self-assessment tools for providing feedback to students as a method for improving student metacognition in the learning process.

Seeking to provide quantitative support for the findings of a qualitative study by McKinney (2007), Pelton (2014) investigated the learning strategies used by sociology majors and the degree to which the students utilized metacognitive approaches. To this end, Pintrich's Motivated Strategies for Learning Questionnaire (MSLQ) was administered at the beginning and end of the semester to students in the researcher's Development of Sociological Theory course. Sixty-seven of the possible eighty-one MSLQ items were included using a 7-point Likert-type scale to measure cognitive and metacognitive learning strategies, student motivation, and resource management strategies. Pretest scores described the sociology majors ($N = 84$) as most likely to use elaboration skills, extrinsically motivated, possessing a relatively high sense of self-efficacy, feeling in control of study habits and learning, and unlikely to seek help from peers or instructors. Posttest results demonstrated a change in the types of cognitive and metacognitive strategies used as a result of the presentation of specific strategies in the course, particularly an increased use of organizational strategies such as outlining and diagramming course content. The researcher also noted a slightly significant and expected movement towards intrinsic motivation and away from extrinsic motivators such as GPA. Based on the findings corroborating with the findings of McKinney (2007), the researcher concluded that the inclusion of cognitive and metacognitive instruction as part of an upper-level sociology course can be beneficial for helping students build skills for life-long learning.

A study conducted by Hewitt (2011) evaluated the effect self-evaluation instruction has on instrumental students' performance and the accuracy of the students' self-evaluations. Students from a private middle school in a metropolitan area (N = 211) were divided into three treatment groups: a group receiving self-evaluation instruction, a group completing daily self-evaluations, and a control group not participating in self-evaluations. Results indicated the self-evaluation instruction had no impact on the students' musical performance or ability to accurately evaluate the performance. Since the performance of students receiving the additional instruction did not appear to be impacted, the researcher recommended the regular addition of self-evaluation instruction as a possible method for building independent musicianship skills in a rehearsal setting.

The purpose of a study by Garrett (2013) was to describe the extent to which critical-thinking activities were being utilized in high school choral rehearsals. Eighteen rehearsals were observed in three public high school programs taught by master teachers. A lower-level and upper-level ensemble from each program were observed twice to determine the frequency of nonperformance activities identified as "low-order thinking skills, critical thinking skills, and noninstructional activities" (p. 306). Results found nonperformance activities accounted for 53.89% of the total rehearsal time, with only 6.36% of the time spent engaged in critical thinking skills. No significant difference was found in the amount of time spent on critical thinking between the beginning- or advanced-level ensembles. Garrett suggests a disconnect may exist between "the value that teachers place on critical thinking as reported in the research literature and the observed function of critical thinking in the classroom" (p. 313). As a result, the researcher suggests that further research into the inclusion of improvisation and composition,

self-evaluation strategies, and reflective questioning in rehearsal settings may yield opportunities for developing methodology for the use of critical thinking in choral rehearsals.

Haston (2013) examined the perceptions of students in secondary music ensembles towards the types of questions asked by ensemble directors in rehearsal. A researcher-designed questionnaire was developed based on Bloom's taxonomy to measure the frequency of four types of questions: specific close-ended questions (SCE), general close-ended questions (GCE), open-ended questions (OPEN), and justification questions (JUST). Using a four-option Likert-type scale, students ($n = 501$) and the corresponding directors ($n = 9$) from nine secondary schools in a northeastern state were asked to rate each of the four types of questions in the context of tone, intonation, balance, instrument/voice technique, dynamics, style, articulation, tempo, ensemble precision, phrasing, and interpretation. Results indicated the teachers perceived a higher frequency of use of SCE, GCE, and OPEN questions than the students, but the students perceived a higher frequency of JUST questions. Among the various demographics, choral students reported the most frequent use of all four question types. No other significant correlations were found. With a non-probability sample, the researcher recommended further research should include a more diverse sample to better determine student perceptions towards the use of questioning techniques in music ensembles.

An overview of the research regarding cognitivist teaching strategies suggests the use of higher-order thinking and metacognition to be effective for both learners and teachers. Providing instruction about metacognition strategies increased the use of critical-thinking language in teaching episodes (Zohar, 2006). Metacognition of students increased the performance even of younger students (Michalsky, Mevarech, & Haibi, 2009). In a higher education setting, the research suggested that the frequency of higher-order thinking questions may be a valid measure

of instructional effectiveness and metacognition may help students continue learning beyond the classroom (Ibabe & Jauregizar, 2010; Pelton, 2014; Renaud & Murray, 2007). The use of cognitivist teaching strategies in musical settings offered mixed results. While the performance of middle school instrumental students receiving self-evaluation instruction did not improve more than those students not receiving the instruction, the equal performance suggested the time taken to develop critical thinking skills did not negatively impact student performance (Hewitt, 2011). Finally, the research determined secondary music educators value critical-thinking skills but rarely engage students in higher-order thinking in rehearsals (Garrett, 2013; Haston, 2013). A disconnect between research, perceptions, and use of cognitivist teaching strategies in music learning settings might suggest a need for further research.

Constructivism: Feedback, Scaffolding, and the Zone of Proximal Development

Constructivism, as a learning theory, explains the learning process in terms of how the learner organizes or constructs information in response to lived experiences. For social constructivists, the interaction between teacher and student or between multiple students provides opportunities for a learner to reinforce old schema or create new ones. The feedback offered by either a teacher or another student informs the construction of knowledge. Using the strategies of scaffolding or helping the learner to achieve a task in the ZPD, a teacher may assist a student to experience and discover new knowledge on his own. As a result, studies regarding the use of these strategies provided insight into how these strategies have been used in educational settings.

Examining the role of one-on-one instruction in solving problems, Wood, Bruner, and Ross (1976) studied the interactions between a tutor and 3-, 4-, and 5-year-old children as the

children solved a problem. A prescribed set of instructions, allowing for individual differences of each child, was administered in a positive learning environment as the participants (N = 30) used a set of interlocking wooden blocks to build a pyramid. Instructions were grouped into three categories and the frequency of each type was recorded. The number of correct building connections made by each participant was also recorded. A change in the type of instruction, appropriate for the development of each age group, was evident as the 5-year-old group performed more connections per intervention than the two younger groups. The researchers presented the following description of scaffolding as explanation of these results:

It is in this sense that we may speak of a scaffolding function. Well executed scaffolding begins by luring the child into actions that produce recognizable-for-him solutions. Once that is achieved, the tutor can interpret discrepancies to the child. Finally, the tutor stands in a confirmatory role until the tutee is checked out to fly on his own. (p. 96)

Thus, the scaffolding strategy was effective in a one-to-one instructional environment in which the tutor was able to tailor the feedback given to each child by providing the appropriate support according to the child's developmental level.

Guerrero and Villamil (2000) presented a case study describing the role of scaffolding and the ZPD in the peer revision interactions of two English as Second Language (ESL) college students. One student was identified as the reader, the other student as the writer of the paper; both were instructed to work together to revise the paper. Based on an audio recording of the revision process, the researchers analyzed a transcription of the discourse and identified specific scaffolding strategies utilized throughout several distinct episodes. Such strategies included intentionality, task regulation, promoting understanding, and contingent responsivity. By using the participants' first language to promote understanding, the participants were able to complete

an unfamiliar task collaboratively. In this way, the scaffolding interaction was found to be mutually beneficial for working within each student's ZPD. The researchers acknowledged the uniqueness of every learning situation but hoped to provide insight into the use of scaffolded peer interactions for promoting ESL student learning.

Danish, Peppler, Phelps, and Washington (2011) tested the effectiveness of a computer-software-based curriculum for teaching young children about the complexities of a beehive. The curriculum and software were designed to utilize instructional approaches aligned with the ZPD and Activity Theory. As a theoretical framework, Activity Theory uses the tools, rules, and divisions of labor within a community to mediate a group learning activity. For this study, forty first- and second-grade students participated in the curriculum by meeting for an hour-long session 2-3 times per week for a total of 18 sessions. Pre- and post-interviews were conducted with each student, and each session was video recorded for later analysis of scaffolding techniques used. Following the coding of interview responses, the researchers found a significant increase in the average correct responses—from 25% on the pretest to 75% on the posttest—and noticed the post-interview responses demonstrated “a rich understanding of the mechanisms through which honeybees collect nectar” (p. 461). Analysis of the types of prompts used by the facilitators in the session discussions was directly linked to the type of response given by students. As the discussion procedures shifted towards more complex tasks, the students continued to offer previous types of responses without prompting, suggesting the inquiry processes had been internalized. For teaching young children other complex scientific constructs, the researchers suggested finding ways to allow the students to find the topic through problem-based inquiry.

Rosenthal (1984) examined the impact of modeling strategies on instrumental music performance. Upper-level undergraduate and graduate instrumental music education students ($N = 44$) were randomly assigned to one of four treatment groups: “(a) guided model, a combined verbal and aural example of a complex musical selection; (b) model only, an aural model only; (c) guide only, a verbal explanation only; and (d) practice only” (p. 265). Participants’ performances of the excerpt were recorded following the treatment and rated for accuracy of notes, rhythm, tempo, dynamics, and phrasing/articulation. Results found participants in the model-only group performed consistently better than all other treatment groups. Guided-model participants did tend to score higher than guide-only and practice-only. Based on the results, the researcher advocated the use of modeling with or without verbal explanation over the use of verbal explanation only as effective teaching strategies for music instruction.

Rutkowski and Miller (2003) conducted a study investigating the impact of feedback and modeling for improving the use of the singing voice and musical aptitude on first-grade students. Using a pretest-posttest procedure, the Intermediate Measure of Music Audiation tonal (IMMAT), the Intermediate Measure of Music Audiation rhythm (IMMAR), and the Singing Voice Development Measure (SVDM) were administered to students in two elementary music classes randomly assigned to either the control or treatment group ($N = 38$). Music instruction was provided once a week for forty minutes for an entire school year. Students in the treatment group received more specific feedback and models than the control group. Results for both groups of students indicated a significant difference for the IMMAT only. Further analysis compared the individual performances of students in both groups to determine the percentage of students who had a score increase, decrease, or not change in the pre-test/post-test administration of the SVDM. In the treatment group, 55% of student’s scores increased compared to only 28%

in the control group. The researchers suggested the increased percentage in students' singing voice achievement among the treatment group indicated the need for additional research on the impact of feedback and modeling for improving singing with a larger sample size.

Using video observations of two middle school choral educators, Freer (2009) examined the frequency with which each teacher used scaffolding language and complete sequential units of instruction. During Phase I, each teacher was recorded three times teaching seventh- and eighth-grade choirs for a total of 6 observations per teacher. Prior to Phase 2, one teacher participated in a discussion about complete sequential units of instruction (teacher presentation, student response, and teacher feedback), whereas the other teacher discussed scaffolding language. During Phase 2, the teachers were asked to focus on using the specific instructional strategy discussed while six additional video observations were recorded per teacher. Transcripts of the videos were coded based on specific types of scaffolding and nonscaffolding language used. The number of complete sequential units of instruction was also counted for each phase. Results indicated the majority of instructional discourse for both teachers in both phases was nonscaffolding, procedural language; however, the percentage of scaffolding language increased for both teachers in Phase 2, with the teacher receiving information about sequential units rising from 4.87% to 12.70%. In analysis of complete sequential units of instruction, the researcher found that the percentage of scaffolding language increased in parallel with the number of complete units. Interestingly, the teacher focused on using scaffolding language had fewer complete sequential units—perhaps because the routine of providing feedback following student response was interrupted. In summary, the researcher suggested focusing on complete sequential units of instruction in choral rehearsals as a way to also increase use of scaffolding language.

As most applied music learning occurs in a social context between a teacher and student, the teaching strategies based in constructivist learning theory offered relevant insights for teaching singing. The research suggested the use of feedback and scaffolding language was effective in one-on-one and peer instructional settings at a wide range of developmental levels, from preschool to college students (Danish, et al., 2011; Guerrero & Villamil, 2000; Wood, Bruner, & Ross, 1976). As modeling can function as a form of aural feedback following a student performance in music, the evidence finding modeling being more effective than verbal explanation alone in music learning was a compelling argument for its use (Rosenthal, 1984). Although focused attention on using scaffolding strategies was found to interfere with complete instructional units, the research suggested the counterintuitive approach of focusing on providing complete units of instruction as a means for increasing the use of scaffolding language in choral rehearsal settings (Freer, 2009). Further research about the use of constructivist teaching strategies for teaching applied music lessons would seem to be a logical need based on the fundamental relationship of teacher and student in this setting.

Music Teaching Styles and Characteristics of Effective Music Teaching

Another avenue of analyzing teaching methods in music education found in the literature has been to identify and label music teaching styles and specific characteristics of effective music teaching. Over more than a decade, Gumm conducted several studies to develop a survey instrument for identifying music teaching styles and then used the survey to examine other variables such as the teachers' background experience and perceptions of student preferences. Survey research was also found identifying perceptions of effective music teaching characteristics among middle school general music teachers.

Gumm (1993) developed an assessment instrument to measure choral music educators' self-reported teaching style. For the initial survey, the 134-item Music Teaching Styles Test (MTST) yielded 475 usable completed surveys from a nationwide random sample of high school choral directors. Following statistical analysis of the data, the researcher selected the five most statistically significant items for each of ten teaching-behavior categories to create the Music Teaching Styles Inventory (MTSI). The teaching behavior categories were student independence, teacher authority, flexible classroom structure, positive learning environment, time efficiency, nonverbal motivation, aesthetic music performance, sequential instruction, group dynamics, and music concept learning. In the validation administration of the MTSI, 210 usable surveys were received. Two of the teaching behavior categories (flexible classroom structure and sequential instruction) were found to lack validity. The remaining categories were used to label eleven choral music teaching styles profiles: student-centered comprehensive musicianship oriented, teacher-controlled comprehensive musicianship oriented, student/subject matter interaction oriented, task-oriented, music performance oriented, cooperative learning oriented, concept presentation oriented, content oriented, low teacher-involvement oriented, discovery-oriented, and nonfocused low-interaction oriented. With this beginning development study, the author recommended further research to remedy the two behavior categories found to be invalid and increase the strength of the assessment instrument.

In a later study, Gumm (2003b) explored the relationships between choral music educator teaching style and individual experiences and background. Using the previous researcher developed Music Teaching Style Inventory (MTSI) and a demographic survey, the researcher collected data from a random sample of national high school choral directors (N = 473). Results identified three sets of related variables: "(a) time and advancement, (b) specialization and

gender, and (c) geography and culture” (p. 1). Reason for success, size of school, and geographic region were the variables most likely to predict teaching style. Variables such as age, highest degree held, and length of time at current school had limited impact on predicting teaching style. As this study was dependent on participant perceptions of individual teaching styles, the researcher recommended the use of observational research and longitudinal studies to provide further insights into the impact of demographic variables on choral music teaching styles.

Gumm (2004) also used the MTSI in a study designed to determine whether individual student learning style and music motivation would forecast perceptions of music teaching style. The research design asked middle school and high school choir students from public schools in eastern Michigan (N = 273) to complete the MTSI, Kolb’s Learning Style Inventory, and Asmus’ Motivation For Music Measures. Results suggested each survey instrument identified unique constructs. The researcher stated, “on average, students in the study were mostly active and concrete learners, were motivated most by effort and musical ability, and perceived their music teachers mostly as positive, efficient, nonverbally motivating, and assertive” (p. 18). In addition, the researcher proposed the use of student perception data as a feasible alternative method for the traditional method of observation since the variability of results often found in student perceptions were accounted for in this study.

The perceptions of music teachers regarding effective teaching strategies in the middle school general music classroom was explored by Button (2010). A questionnaire with 48 items describing teaching characteristics was completed by 26 first-year teachers. The questionnaire asked the respondents to reply with a level of agreement using a 5-point Likert-type scale with 1 being low and 5 being high. For analysis, the researcher grouped the questionnaire items into the areas of student, evaluation, management, and subject. From these groupings, the researcher

found two of the four categories of characteristics with the highest mean were associated with teacher personality, which may indicate this group of music teachers perceived classroom behavior to be a greater contributing factor toward teacher effectiveness. Results also demonstrated a diversity of approaches perceived to be effective by the group of music teachers. The researcher recommended making music teachers more aware of ways to encourage independent student growth through both individual and group learning opportunities as a means for developing creativity and higher-order thinking in music.

According to these studies, music teaching styles and perceptions towards effective music teaching characteristics can be measured through the use of survey instruments. Teacher personality was found to be both a significant characteristic of effective teaching and a predictor of student preference for music teaching style. While personality was a key variable, the questionnaires used by Gumm (1993, 2003b, 2004) and Button (2010) focused on teaching strategies and characteristics rather than personality traits. Among the strategies included, four learning-theory-based teaching strategies were identified: establishing challenging learning goals for each rehearsal, providing feedback through complete instruction cycles, the use of self-evaluation of student performance, and engaging students in analysis and application of musical concepts through higher-order thinking questions.

Applied Music Teaching Characteristics

Having examined the research regarding the application of specific LTBTs in other educational settings, the following studies represent research specific to the applied music lesson context. Kennell (2002) acknowledged a particular challenge found in conducting research of studio instruction by stating, “the testimony of expert teachers, also known as ‘methods,’ lies in

epistemological contrast with positivistic investigative tools that search for global truths” (p. 244). Kennell further suggested this dichotomy has continued to be an obstacle for research in the field as “practitioners in studio teaching simply do not trust or value knowledge generated from systematic research” (p. 253). Rather than relying solely on the expertise passed down from expert to novice, research in applied music teaching uses both qualitative and quantitative data to develop a richer description of music teaching often done behind closed doors.

Attempting to provide an evaluation tool for applied music lessons, Abeles (1975) designed and tested the Applied Faculty Student Evaluation Scale (AFSES). Using undergraduate and graduate music student descriptions of outstanding applied music instructors, 123 descriptive statements regarding teaching behavior were organized into five categories: “rapport, communication technique, musical knowledge, musical understanding, and performing ability” (p. 148). Applying a five-point Likert-type scale to the statements, ten applied lesson teachers were evaluated by current undergraduate and graduate students ($N = 93$). Thirty statements were selected based on a four-factor analysis to produce an instrument of practical length. The shorter version was retested for interjudge reliability by having seventeen brass students evaluate four brass teachers. Combined with the criterion-related validity, results demonstrated sufficient interjudge reliability for the total score to suggest the appropriateness of using the instrument for evaluating applied music faculty. The researcher recommended further research to determine the relationship between this instrument and other traditional methods of faculty evaluation, including peer evaluations.

Recognizing the previously identified role of teacher personality on effective music teaching, Schmidt (1989) conducted a study to investigate the relationships between teaching behaviors and personality types as determined by the Myers-Briggs Type Indicator (MTBI)

assessment. Replicating the procedures utilized by DeNovellis and Lawrence (1983) in a study of 4th-8th-grade classroom teachers, Schmidt observed the teaching of graduate associate instructors (N = 43) in the applied lesson setting. Following the observation, each participant completed the MTBI and the observations were coded to identify the frequency of teacher and student behaviors. The most frequent behaviors were identified as teacher talk, student performance, and teacher modeling. MANOVA analyses showed personality type interacted significantly with four behaviors: approvals, rate of reinforcement, teacher model/performance, and pace. No significant correlation was found for disapproval, teacher talk, or questioning behaviors. Since the findings were somewhat different from the previous study, Schmidt stated, “although the results of this study suggest that certain personality variables and their interactions are related to aspects of teaching behavior, it should be stressed that generalizations are restricted to behaviors in the individual applied lesson” (p. 268).

With the reliance on the apprenticeship model for teaching applied lessons, examination of exemplary teachers provides insight into possible effective teaching characteristics. Renowned violin teacher, Dorothy DeLay, was the focus of a case study about expert teaching conducted by Gholson (1998). Observations of lessons, interviews, and contextual artifacts were collected from April 6, 1988, to May 30, 1989. The data sets were analyzed using the theory of proximal positioning for helping students through zones of proximal development as the basis for emerging themes. Observed teaching themes were categorized into preparatory or facilitative strategies. Preparatory strategies “enabled the teacher to probe student frames of reference, organize instructional interventions, and establish contextual goals” (p. 539). Facilitative strategies focused on instructional interventions including establishing a comfortable learning environment in which students are challenged to grow areas of weakness, using metaphors to

enhance understanding, and building metacognitive skills to enhance technical skills. DeLay's specific implementation of these strategies was dependent upon the context of each student's level of development. The researcher suggested this demonstrated how student contributions to the lesson environment might also impact successful instruction in applied music lessons.

A study by Bennett and Stanberg (2006) investigated the impact of positive interactions with teaching during undergraduate study on the perceptions of composition, performance, and music education majors towards teaching in the future. Students in a combined cohort of 2nd-year music education, performance, and composition majors at the University of Western Australia (N=38) completed a questionnaire before and after participating in a 12-week introductory seminar to teaching. The course was designed to engage students in the teaching and learning processes, including peer teachings in small groups. The survey data showed "an increased understanding of the roles of teaching and performance in educational and community settings" from having worked together with a combined concentration cohort (p. 225). A positive change in the perception of the role of teaching in future careers was seen in performance and composition majors, while music education students demonstrated an increased awareness of the benefits of collaboration with performing artists. The researchers anticipated the continued inclusion of the course for future undergraduate students as a way to effect positive changes in attitudes towards teaching as a realistic career goal for performers.

In an attempt to better understand effective studio teaching, some research about applied music teaching has focused on common characteristics observed in lessons. Duke and Simmons (2006) analyzed video recordings of three highly effective instrumental applied teachers. The researchers identified 19 common elements "that related directly to effecting positive change in students' performances" (p. 10). Those 19 elements were grouped into three categories: goals

and expectations, effecting change, and conveying information. The researchers suggested that the consistent appearance of these 19 characteristics among the three master teachers of differing instruments and unique personalities could suggest the universal nature of these elements in effective teaching. Further research and analysis to describe effective private lesson teaching in different settings was recommended.

Recognizing the limited nature of the research by Duke and Simmons, Parkes and Wexler (2012) sought to replicate the study with three different instrumental applied teachers. By observing video recordings of lessons with a different group of teachers, Parkes and Wexler discovered “almost one out of three (28.48%) lesson behaviors observed did not fit within the parameters of element coding in the original study” (p. 55). As a result, Parkes and Wexler identified seven additional elements beyond the 19 identified by Duke and Simmons (2006); these may have been a reflection of the different needs and skill levels of the students being taught. The seven additional identified characteristics were the student struggling with the repertoire, directed attempts of short passages, side coaching by the teacher during a student performance, teacher modeling of notes/rhythms without expressive quality, conducting or clapping just before or during a student performance, discussion of practice techniques, and the teacher accepting “flaws in a student performance with a view to focus on getting to the end without stopping” (p. 54). Despite the differences in findings between the two studies, both studies highlight the need for further research in identifying best practices in the applied studio for increasing student learning across diverse populations.

Gaunt (2008) explored the perceptions of applied music lesson instructors in higher education regarding broad processes of individual instruction. Twenty private lesson teachers at a music conservatoire in the UK served as a representative sample of departments, gender,

professional profiles, and teaching experience. Semi-structured interviews from each participant were audio-recorded and transcripts were created for analyses, which were verified for accuracy by the participants. The transcripts were analyzed using a seven-step recursive analysis process, which served to determine the frequency of common themes. Some of the common themes found were the importance of the student-teacher relationship, a lack of formal training in teaching, and the feeling of isolation from the rest of the instructional environment in which the students participate. Gaunt also reported that the teachers described a wide range of objectives and goals for the lessons and noted a tension in the desire of the teachers for students to be autonomous learners while recognizing the important role of the teacher in the learning process. Although the study was intentionally designed to provide a more holistic view of individual music instruction, the researcher discussed the need for further research to promote teaching strategies that help teachers create independent learners in the private music studio and develop structures within higher education music instruction programs designed to integrate applied lesson instructors with the rest of the curriculum.

In a qualitative research study, Clemmons (2009) explored the traits of strong student-teacher rapport. The researcher observed and interviewed four master teachers from the National Association of Teachers of Singing Summer Intern Program, observed and interviewed 20 of their students, transcribed and analyzed fifteen hours of taped interviews, and gathered data from 13 of the 36 NATS master teachers via a questionnaire. The researcher found the following four themes among the data: teaching expertise; creating a safe learning environment; establishing clear expectations combined with appropriate relational boundaries; and a passionate, infectious teaching style. The researcher recommended the inclusion of these principles in undergraduate

and graduate pedagogy courses as a way to promote positive student-teacher rapport in the studios of future applied lesson teachers.

With a background in both a music education classroom and private studio, McPhail (2010) used self-critique to analyze the studio teaching practices of the researcher. By video recording a series of lessons, McPhail examined the frequency of specific teaching strategies in three categories: “teaching modes, the quality of feedback, and the difficulty and challenge of engendering change in action” (p. 39-40). The researcher observed the effectiveness in balancing the amount of time spent practicing technical aspects and giving the student a “chance to work more holistically, approximating the skills involved in a ‘real’ performance” (p. 41). Specific feedback and use of questioning allowed the students to take more ownership and develop autonomy. However, when examining the ability to effect change, the researcher recognized the challenge in actually implementing new strategies rather than relying on familiar teaching habits. The researcher suggested the self-evaluation of teaching served as a valuable tool for encouraging metacognition for both student and teacher.

Parkes (2010) conducted a study measuring the sense of self-efficacy of collegiate applied music performance teachers using an adapted version of the Teachers’ Sense of Efficacy Scale (TSES) developed by Tschannen-Moran and Woolfolk-Hoy (2001). Participants (N = 246) were faculty members from eight randomly selected states who teach at institutions listed in the College Music Society directory and whose email addresses were available on the institutions’ websites. The TSES was modified by adding demographic questions and a section of open-ended questions. Participants completed the questionnaire online. Data analysis showed a high level of self-efficacy among respondents who were predominantly male with a Doctor of Musical Arts degree in performance and at least ten years of teaching experience. Specifically, providing

alternative explanations, controlling disruptive behavior, and crafting good questions received the highest mean scores, while assisting families, motivating students, and using a variety of assessments received the lowest mean scores. Additional data from the open-ended question section showed 68.8% of respondents to both sections ($n = 170$) “reported they had not had any classes, training, or instruction in how to grade, evaluate, measure, or assess musical performance” (p. 27). Since the results of this study represented primarily collegiate applied music instructors with at least ten years of experience, the researcher was careful to limit any generalizations to the study sample. Rather, Parkes recommended future research should utilize a larger sample size with a more diverse representation of the number of years teaching.

The purpose of a nested case study by Burwell (2016) was to investigate the causes of dissonance or possible difficulties between teacher and student in the studio lesson environment. In a preliminary questionnaire and subsequent interview, a first-year singer was identified as feeling dissatisfied with the student’s voice teacher. Individual lessons were recorded and semi-structured interviews with both the student and teacher were completed shortly after each lesson. Using a social constructivist philosophical perspective, the researcher analyzed the recordings to identify non-verbal behaviors, verbal behaviors, and performance behaviors. According to the researcher, the specific areas of dissonance seemed to be a result of “tensions, contradictions, and misunderstandings” between this student and teacher. The need for defined roles of authority and the development of trust in the student/teacher relationship through open communication were suggested as possible key factors for limiting dissonance in the studio-teaching environment.

Chapter Summary

While the aforementioned studies did not identify previously measured perceptions of applied teachers toward teaching strategies labeled as learning-theory-based or examine the specific use of such strategies for teaching singing, these studies provided insight into the types of teaching strategies already identified as being used in applied music instruction. Such strategies included providing structures for students to learn to practice, the use of questioning to engage the students in self-analysis of performances, collaboratively setting goals between the teacher and student to promote ownership, and the use of high quality models as an aural reference for student performance. Combined with learning-theory-based teaching strategies such as selecting repertoire just beyond the skill level of a student and the use of priming in technical exercises for difficult passages, an ideal model for teaching singing using learning-theory-based teaching strategies was formed and served as a reference point for examining the use of such strategies by collegiate teachers of singing.

CHAPTER THREE

RESEARCH DESIGN AND PROCEDURES

Defining Mixed Methods Research

Using a mixed methods design, this study was designed to explore the uses of LTBTs for teaching singing by collegiate teachers of singing from multiple perspectives. According to Creswell and Plano Clark (2011), mixed methods research began being accepted as a third research paradigm in the American research community in the late 1980's. Mixed methods research, as was used in this study, grew out of a need to answer complex research questions that call "for answers beyond simple numbers in a quantitative sense or words in a qualitative sense" (Creswell & Plano Clark, 2011, p. 21). While some opponents posit that the quantitative and qualitative paradigms are incompatible, mixed methods researchers, Johnson & Onwuegbuzie (2004) state, "the goal of mixed methods research is not to replace either of these approaches but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies" (pp. 14-15). As such, a key characteristic of mixed methods research is the rigorous application and use of both qualitative and quantitative research methods.

Aside from the collection of both quantitative and qualitative data, Creswell and Plano Clark (2007) identify several characteristics and corresponding considerations for conducting mixed methods research. These core characteristics include a) the integration of quantitative and qualitative data through combining, building sequentially, or embedding the data sets; b) prioritization of one or both types of data depending on the research focus; c) implementation of procedures in a single study or multi-phase program of study; and d) framing of the procedures within philosophical and theoretical lenses. A primary consideration for implementing a mixed methods study is to determine the need for the use of mixed methods research and whether the

researcher has the skills, time, and resources required for conducting both types of research. Another significant consideration is determining a defined method of integrating the data sets; as Creswell (2015) states, “mixed method research is not simply the gathering of both quantitative and qualitative data” (p. 2).

With a variety of options for prioritization, sequence of collection, and integration of data, Creswell (2015) has further identified three basic mixed methods research designs. A *convergent design*—sometimes referred to as a triangulation-convergence or convergent parallel design—prioritizes both the quantitative and qualitative approaches and is focused on merging the concurrently collected data. An *explanatory sequential design* begins with a quantitative phase and then uses a qualitative phase to further explain the quantitative results. Using a reversed sequence, the third design, *exploratory sequential*, often uses an initial qualitative phase to inform the development of quantitative methods. Prioritization in both an explanatory or exploratory sequential design may be given to either one or both of the phases. Three advanced designs—embedded, transformative, and multiphase—are also suggested by Creswell and Plano Clark (2011) but were not considered by the researcher due to the complexity of the designs, time constraints for implementing the proposed research, and incompatibility with the research objectives.

Mixed Methods Research in Music Education

In the field of music education, the use of mixed methods research has slowly grown since 2004 (Fitzpatrick, 2014). From 2004 to 2010, Fitzpatrick identified 13 dissertations using mixed methods designs that explore a variety of music education research questions including the uses of a variety of teaching strategies, motivation and self-efficacy, and factors affecting

persistence in undergraduate music education programs. A search on the ProQuest Dissertation & Theses Database using the terms “mixed methods” and “music education” identified an additional 24 dissertations written between 2011 and 2017. Although mixed methods research is being used in dissertations, only a few mixed methods studies have been published in journals. The following four studies represent two convergent design and two explanatory sequential design studies published in the field of music education.

In a triangulation-convergence mixed methods study, Fitzpatrick (2011) examined the unique dynamics instrumental music teachers encounter in an urban context. The three-phase research design began with an exploratory focus group, which provided themes used for developing a survey instrument used in Phase 2. Following revisions of the questionnaire based on a pilot test, the survey was administered by census to instrumental music teachers in the Chicago Public Schools, yielding a total of 90 responses. To further explain the phenomenon, the researcher collected qualitative data from four teachers using a pre-interview, day of observation, and post-interview protocol. The four teachers were representative of two identified important subgroups: two inexperienced teachers with less than five years of experience (one in a thriving program and one in a struggling program) and two experienced teachers with more than five years of experience (one in a thriving program and one in a struggling program). In order to merge the distinctive data sets, a matrix was created listing the corresponding quantitative survey themes with the qualitative codes and assigning an alignment label of confirm, contradict, enhance, or mixed. Results indicated a complex belief system held by urban instrumental music teachers that was reflected in the need for knowledge of how to implement pedagogical approaches to the specific context, the student-centered focus of the classroom environment, and the concept of those classrooms as being a safe haven for “students living in urban environments

that experience high levels of violence, drugs, and gang activity” (p. 250). Besides recommending further study, Fitzpatrick suggested that the use of a mixed method design was effective because of the complex nature of teaching and learning in music.

Matthews (2017) also used a parallel-convergent mixed method design to examine the beliefs collegiate marching band members held about the ensemble during the course of a performance season. Near the beginning, middle, and end of the marching band season, 53 undergraduate band members at a Midwestern university participated in either a focus-group-only or focus-group-with-survey. Focus group assignments were varied each time: the first group was a random assignment, the second grouping was by instrument family, and the third group was by academic classification. The Group Environment Questionnaire was used concurrently with the focus groups to measure perceptions towards group cohesion and collective efficacy throughout the season. Quantitative results confirmed the hypothesis of decreased ensemble efficacy as the season progressed. Results also indicated a consistently high level of group integration and attraction to the group during the season. Qualitative themes supported these findings with the following five themes:

- (1) Connections, their pride in the band and its connectedness to their school and beyond;
- (2) family, how the band represents a family environment; (3) acceptance, belonging to the group; (4) music, the role of music in their lives; and (5) time, the temporal beliefs of the group throughout the season. (p. 1)

The convergent mixed methods design of this study allowed the researcher to merge the data to determine how the ensemble members’ beliefs changed over time and the factors contributing to those changes.

A study by Bazan (2011) sought to examine the use of student-directed instruction (SDI) in middle school instrumental classrooms. An explanatory sequential research design was implemented to quantitatively describe preferred teaching strategies of specific populations and to qualitatively determine the degree to which three participants may use SDI or teacher-directed instruction (TDI). Using Gumm's Music Teaching Style Inventory and a researcher-designed demographic questionnaire, Bazan surveyed 49 public school instrumental music teachers from six counties in northeastern Ohio. Participants represented diversity in gender, years of teaching, highest degree held, school settings, number of students enrolled, length and number of rehearsals per week, and number of concerts performed per year. SDI and TDI scores were calculated resulting in mean scores of 86.37 (sometimes uses SDI) and 111.88 (always uses TDI), respectively. In analyzing the correlations between teaching style and specific populations, the researcher found significant differences in the number of students enrolled in the program, number of concerts performed per year, and the overall school-wide performance on standardized tests. No significant differences were found in gender, years of experience, highest degree earned, or school location.

Based on the results of stage 1, Bazan identified three individuals ranked in the highest SDI scores (third, fourth, and sixth) to conduct observation of rehearsals and semi-structured interviews. Frequency of observed SDI and TDI behaviors were scored following coding of the rehearsal video transcripts. Although the participants indicated a preference for SDI on the MTSI, TDI behaviors were observed most frequently at 61.3%, 84.3%, and 68.9% of the time for each respective participant. The follow-up interviews offered possible explanations: traditional music rehearsal methods favor TDI approaches because of their efficiency and performance driven outcomes, specific times of the year offer a better opportunity to use SDI methods than

the observed rehearsals, and SDI strategies were easier to implement in smaller class sizes because of classroom management issues. Since the TDI methods were found to be more prevalent in middle school instrumental classrooms, the researcher hypothesized a complete shift to SDI would be impractical. Instead, the researcher suggested finding a more balanced approach, which includes both the efficiency and discipline of traditional rehearsal approaches and “providing students with more frequent opportunities to self-assess and solve problems [sic] could lead to less reliance on directors and greater independence” (p. 53)

Using an explanatory sequential design, Gerrity, Hourigan, and Horton (2013) examined situations for promoting music learning among students with special needs. A pretest-posttest procedure utilizing a 20-item inventory about pitch and rhythm was used to measure musical ability and growth of a group of students with special needs ($N = 16$). Although the pretest and posttest scores remained in the overall mean musical ability classification of “poor,” statistical analysis of the quantitative data indicated a significant difference in the pretest and posttest scores. These results suggested the students did experience musical growth in the context of the experiment. Follow-up semi-structured interviews ($N = 31$) were conducted with three groups of participants (students, parent/guardians, and mentor) in order to identify recurring themes among the participants lived experiences in the music learning environment. Three themes emerged in the qualitative analysis: “*the revelation of knowledge and skills, effective teaching strategies, and essential conditions for learning*” (p. 153). As the justification for using an explanatory sequential research design, the participant statements corroborated the quantitative evidence of growth. Additionally, the qualitative data suggested specific conditions contributing to the musical growth, such as repetition, freedom of student choice, allowing for longer response times, clear and concise instructions, having a behavior plan, and establishing an encouraging

environment free of extraneous distractions. By demonstrating quantifiable student musical growth and identifying the lived experiences empowering the growth, the researchers recommended using the aforementioned strategies and providing an individual mentor for each student with special needs in the music classroom.

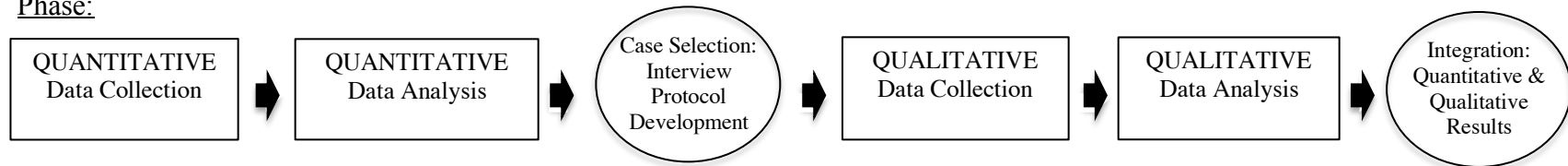
An Explanatory Sequential Design

As seen in the two previous studies, an explanatory sequential design focuses on using qualitative data to explain quantitative trends. Creswell and Plano Clark (2011) describe the explanatory sequential design as “the most straightforward of the mixed methods designs” (p. 83). This statement may be a result of the ability to focus on one type of data at a time when using an explanatory sequential design: the quantitative phase is completed first before the second qualitative phase is developed to provide insights into possible reasons for the results. These isolated phases, although time consuming, allow a single researcher to complete the study. Similarly, the integration of data may occur primarily at the point of using the quantitative data to inform the qualitative phase, which allows for clear distinctions between data sets in the final report. These accessible characteristics are likely the cause of the popularity of this mixed methods research design (Ivankova, Creswell, & Stick, 2006).

Even though the design is considered straightforward, Ivankova, Creswell, and Stick (2006) define several challenges in using an explanatory sequential design. The first consideration is found in assigning priority to a single phase or both phases of the study. The quantitative phase is often given priority as it “comes first in the sequence and often represents the major aspect of the mixed-methods data collection process” (p. 9). Another consideration is the sequence of phases and the points at which the data will be integrated. Creswell and Plano

Clark (2011) recommend creating a procedural diagram to clarify the sequencing of phases, procedures to be used, prioritization of phases, and expected products of each phase.

For this study, the explanatory sequential design was chosen because of the ordering of phases and the method of integrating data. With the quantitative phase being conducted first, the survey data enabled the researcher to select participants for the qualitative phase and develop lines of inquiry to clarify the quantitative results. Thus, a key point of data interaction occurred in between the two phases. Whereas the use of quantitative data to inform the qualitative data collection might indicate a prioritization of the former data set, both phases of this study were given priority as each was considered to be a robust representation of two perspectives of the phenomenon and necessary for providing a more complete picture of the overall phenomenon. Figure 3.1 presents an overview of the procedures and products associated with each phase to help clarify the design of this study. Specific details of each phase are discussed in the following sections of this chapter.

Phase:Procedure:

- | | | | | | |
|--|---|---|--|---|--|
| <ul style="list-style-type: none"> • Census web-based survey (N = 350) using College Music Society Database | <ul style="list-style-type: none"> • Qualtrics • Data screening • Frequencies • Correlations • SPSS Quan. Software | <ul style="list-style-type: none"> • Purposefully selecting of participants representing diverse experiences (N = 3) • Development of interview questions | <ul style="list-style-type: none"> • Individual Zoom Pre-Observation interviews • Email follow-up • Site-Visit including 2 Video Recordings of lessons per participant • Elicitation of teaching materials | <ul style="list-style-type: none"> • Coding and thematic analysis • Within-case and across-case theme development • Cross-thematic analysis • MAXQDA qual. software | <ul style="list-style-type: none"> • Interpretation and explanation of the quantitative and qualitative results |
|--|---|---|--|---|--|

Product:

- | | | | | | |
|---|---|---|--|---|--|
| <ul style="list-style-type: none"> • Numeric & Text Data | <ul style="list-style-type: none"> • Composite Mean and SD for Attitudinal and Importance Scores • Descriptive Statistics | <ul style="list-style-type: none"> • Cases (N = 3) • Interview Protocol | <ul style="list-style-type: none"> • Text Data • Image Data (video) • Researcher Reflections • Audit Trail | <ul style="list-style-type: none"> • Codes and Themes • Similar and Different Themes and Categories • Cross-thematic matrix • Member Checks • Advisor Review | <ul style="list-style-type: none"> • Conclusions • Implications • Future Research |
|---|---|---|--|---|--|

Figure 3.1. Procedural diagram for an explanatory sequential mixed methods design.

Quantitative Data Collection

As a descriptive attitudinal survey, the quantitative phase of this study used an online questionnaire to measure the perceptions of collegiate teachers of singing toward the effectiveness of the use of learning-theory-based teaching strategies for teaching singing. The target population consisted of university and college voice teachers and choir directors in the United States as listed in the 2016-2017 College Music Society Directory of Music Faculties. As stated in Chapter 1, the general research question explored in the quantitative component of this study was:

What are the perceptions of collegiate teachers of singing towards the use of learning-theory-based teaching strategies for teaching singing?

In order to more clearly define the perceptions of voice teachers, the researcher also explored these additional research questions:

1. To what extent do collegiate teachers of singing perceive learning-theory-based teaching strategies to be important for teaching singing?
2. How frequently do teachers of singing believe they use learning-theory-based teaching strategies for teaching singing?
3. Which teachers of singing, if any, are more likely to have positive or negative perceptions regarding the appropriateness of using learning-theory-based teaching strategies in the teaching of singing?

Thus, the primary variable of interest was the perceptions of collegiate teachers of singing toward the use of learning-theory-based teaching strategies for teaching singing. The variable was measured using a questionnaire of Likert-type items and demographic questions

developed by the researcher titled “Effective Teaching Strategies for Teaching Singing” (see Appendix A). Consequently, *perceptions of learning-theory-based strategies* (PLTBS) was defined as the degree of favorableness and degree of importance as seen in the responses of the teachers of singing. Operationally, the degree of favorableness was determined by a summation of the scores given by the respondent for each of the ten Likert-type attitudinal statements, scaled 1 to 6, included in the questionnaire. The rubric in Figure 3.2 represents the possible classifications for the degrees of favorableness:

<u>Attitudinal Score</u>	<u>Attitudinal Classification</u>
10 – 19	Very Unfavorable
20 – 27	Unfavorable
28 – 35	Somewhat Unfavorable
36 – 43	Somewhat Favorable
44 – 51	Favorable
more than 51	Very Favorable

Figure 3.2. Classifications for degrees of favorableness.

Operationally, the degree of importance was also determined by a summation of the scores given by the respondent for each of the ten Likert-type importance statements, scaled 1 to 6, included in the questionnaire. The rubric in Figure 3.3 represents the possible classifications for the degrees of importance.

<u>Importance Score</u>	<u>Importance Classification</u>
10 – 19	No Importance
20 – 27	Low Importance
28 – 35	Slight Importance
36 – 43	Moderate Importance
44 – 51	High Importance
more than 51	Extremely High Importance

Figure 3.3. Classifications for degrees of importance.

The researcher developed the measurement instrument using teaching strategies mentioned in the review of literature. Since the questionnaire lacked prior use, reliability and validity needed to be established for the measurement instrument. In a pilot study ($N = 12$), a Cronbach's alpha coefficient of $\alpha = .70$ for the questionnaire was determined using the data collected from respondents in the state of Arkansas. It was determined that three questions, all tied to the same learning-theory strategy, negatively impacted the Cronbach's alpha reliability score. Removal of the correlated attitudinal questions improved the Cronbach's alpha coefficient to $\alpha = .744$; the alpha coefficient improved further to $.752$ with the elimination of the correlated importance questions. As a result, a simplification in wording was made to the corresponding questions to establish a more acceptable internal consistency reliability score. Using the revised version, three experts were then asked to complete a face-validity test. Based on comments provided by these experts, additional minor changes to wording were made to strengthen the clarity of the survey. As can be seen in Appendix B, the experts' ratings resulted in a grand mean of 1.31 for all questions and directions, indicating a strong degree of clarity and relatedness of survey questions to teaching singing. The questionnaire was also reviewed and approved by a College Music Society (CMS) panel when obtaining permission to use the society's distribution service. As a final step, Institutional Review Board (IRB) approval was obtained for the quantitative phase of this study on August 21, 2017, with the initial IRB protocol #1106128-1 (Appendix C).

Based on the CMS policy of not sharing email addresses, a census of the population was used rather than a random sample of the target population. To ensure the broadest distribution, seven CMS directory categories were invited to complete the questionnaire: Voice, Class Voice, Vocal Pedagogy, Opera, Choral, Music Education-Choral, and Choral/Vocal Conducting.

Although the combined number of email addresses attributed to these seven categories was 10,846, the mailing system used by CMS removed duplicate addresses found in multiple category lists. Thus, an initial email consisting of an introductory letter with a link to the online questionnaire in Qualtrics was distributed by CMS to 6,946 email addresses. Second and third email reminders were sent to 6,923 and 6,912 recipients, respectively. The decrease in number of emails sent during each iteration was attributed to the mailing system used by CMS, which removes invalid or bounced email addresses following each use. As a result, the researcher selected 6,912—the final number of emails sent—as the number most nearing the target population.

During the time the questionnaire was open—from September 26 to October 26, 2017—a total of 350 useable responses were collected. Partial or incomplete responses were not counted. Of the 350 useable responses, 317 participants reached 100% completion. The remaining 33 responses were determined to be useable based on the participants' completion of all questionnaire fields and view of the final screen. Based on the population of 6,912 and a sample size of 350, a confidence interval or margin of error was calculated at $\pm 5.1\%$ using a confidence level of 95%. These results were very similar to the recommended sample size of Krejcie and Morgan (1970), suggesting the sample size—which exceeded 5% of the population—was large enough to be generalizable to the population.

At the conclusion of quantitative data collection, the reliability of the survey instrument was again measured to ensure the changes made to the questionnaire during the development phase did not compromise its internal consistency. Using the data from the actual study sample, a Cronbach's alpha coefficient for the 10 Likert items measuring participants' attitudes towards using LT BTS was calculated at $\alpha = .722$. Similarly, the Cronbach's alpha coefficient for the 10

Likert items assessing the degree of importance participants assigned to LT BTS was measured at $\alpha = .701$. With both α scores for the study at or above .70 and consistent with the α scores from the pilot study, the researcher determined the questionnaire demonstrated characteristics of a reliable survey instrument.

Demographic Characteristics of the Quantitative Participants

Of the participants ($N = 350$), 71% ($n = 247$) selected voice teacher as their primary teaching role and 22% ($n = 76$) chose choir director. An additional 6% ($n = 21$) identified first as a music educator. For the secondary teaching role, participants were allowed to select all applicable categories resulting in 384 responses for the question. The highest response frequency for the secondary teaching role was music educator ($n = 134$), receiving 41% of the responses. Voice teacher, opera director, and choir director were each selected with a similar frequency at 17%, 16%, and 14% respectively. Thirteen participants (4%) wrote in vocal pedagogy or voice science as a secondary teaching role for the other category. Figure 3.4 and Figure 3.5 depict the frequencies for all primary and secondary teaching role categories.

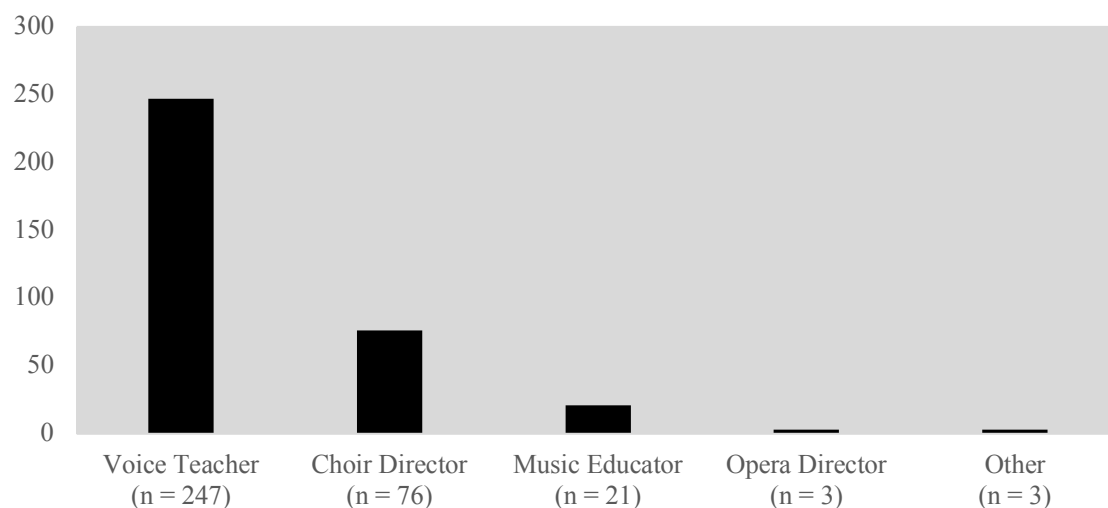


Figure 3.4. Frequency graph for primary teaching role.

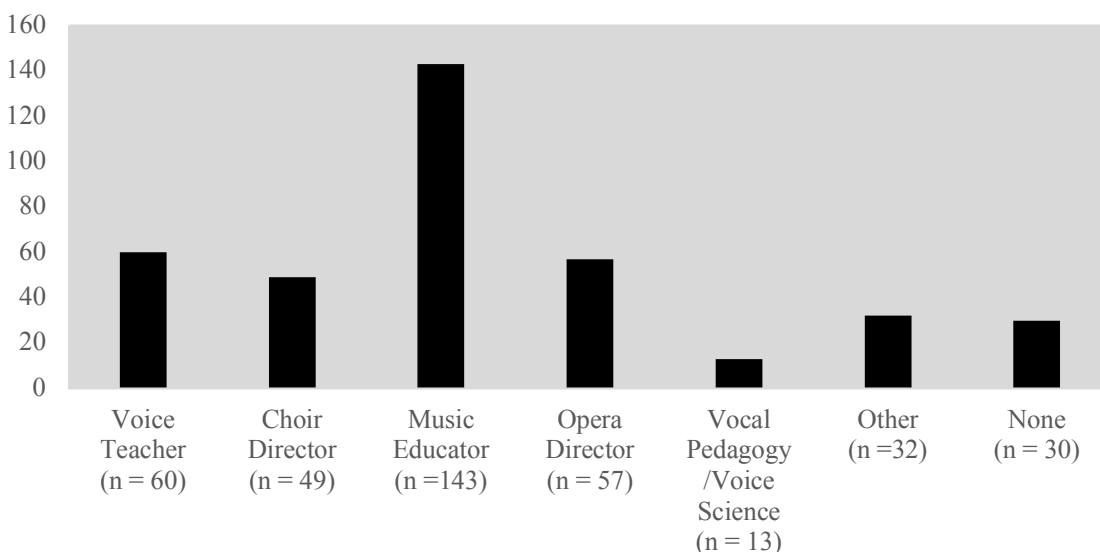


Figure 3.5. Frequency graph for secondary teaching role.

Of all the demographic data collected, the primary and secondary teaching roles of respondents most nearly aligned with the CMS directory categories used to conduct the survey research. In order to determine whether the data sample was representative of the target population, the researcher compared the frequency of the target population represented by the number of email addresses identified for each CMS directory category to the frequency of the responses for each teaching role identified in both the primary and secondary role responses. As can be seen in Table 3.1 and Table 3.2, the sample percentages for the four questionnaire categories that are most similar to the CMS directory categories—opera director, choir director, voice teacher, and vocal pedagogy—are quite similar, with the percent difference ranging from 0.3% to 2.9%. A comparison of the CMS category of music education choral with the questionnaire category of music educator yields the widest difference of 9.3%; this may perhaps be attributed to participants identifying as a music educator philosophically but not as a title.

Based on the similarities found when comparing the frequency of teaching categories with the size of the sample, the researcher determined the sample could be considered representative of the target population.

Table 3.1

Frequency Distribution of Target Population by CMS Directory Category

CMS Directory Category	Frequency	%
Voice	4509	41.6%
Choral	2163	19.9%
Music Education Choral	1410	13.0%
Choral/Vocal Conducting	1346	12.4%
Opera	1050	9.7%
Vocal Pedagogy	226	2.1%
Class Voice	142	1.3%

Table 3.2

Frequency Distribution of Primary and Secondary Teaching Role

Questionnaire Category	Frequency	%	% difference from CMS Category
Voice Teacher	307	41.8%	0.2%
Choir Director	125	17.0%	-2.9%
Music Educator	164	22.3%	9.3%
None	30	4.1%	n/a
Opera Director	60	8.2%	-1.5%
Vocal Pedagogy	13	1.8%	-0.3%
Other	35	4.8%	n/a

To better understand the type of educational training participants had received, respondents were asked to identify the type of undergraduate degree earned and the level of the highest degree held by the participant. Forty-six percent of the responses identified the Bachelor of Music – Music Performance (n = 162) as the type of undergraduate degree earned. An additional 27% earned a Bachelor of Music Education (n = 95). Figure 3.6 represents all responses for type of undergraduate degree earned.

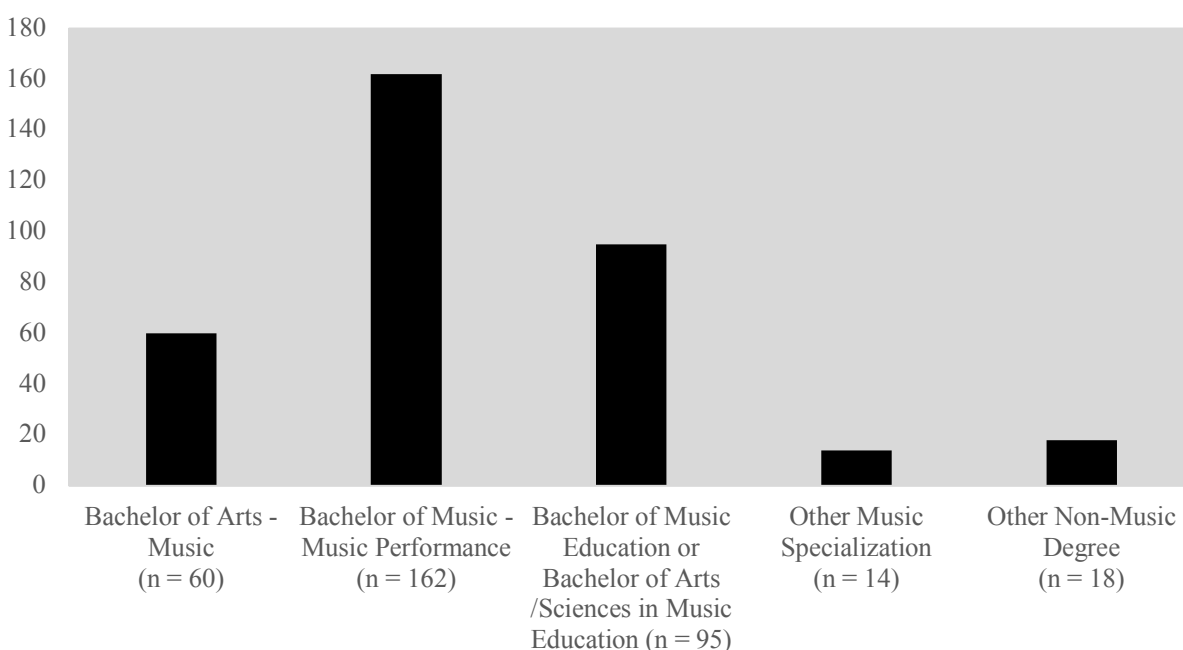


Figure 3.6. Frequency graph for type of undergraduate degree.

Because the target population was focused on individuals teaching at the university or collegiate teaching level, most respondents had earned at least a master's degree (n = 125) or doctoral degree (n = 205), represented by 36% and 59% of the sample, respectively. Figure 3.7 lists all responses for highest degree earned, including the five participants whose highest held degree was a bachelor's degree.

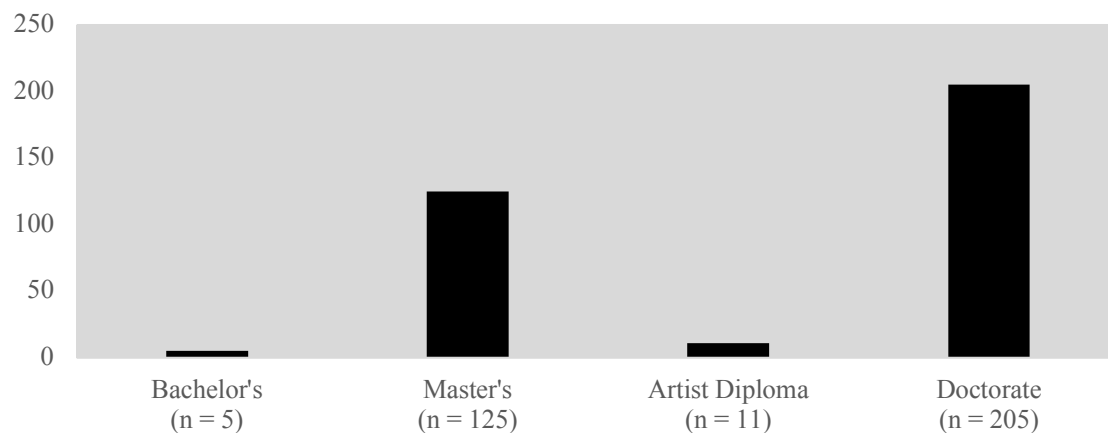


Figure 3.7. Frequency graph for highest degree earned.

The type of higher educational institution at which the respondents currently teach—as represented by private, public, or community college—offered a split representation between private and public four-year institutions. Public institutions were identified by 42% ($n = 148$), while private universities and colleges were represented by 43% ($n = 151$) of the sample. Ten percent of the participants were classified as teaching at a community college. Figure 3.8 depicts the frequencies for the type of higher educational institution.

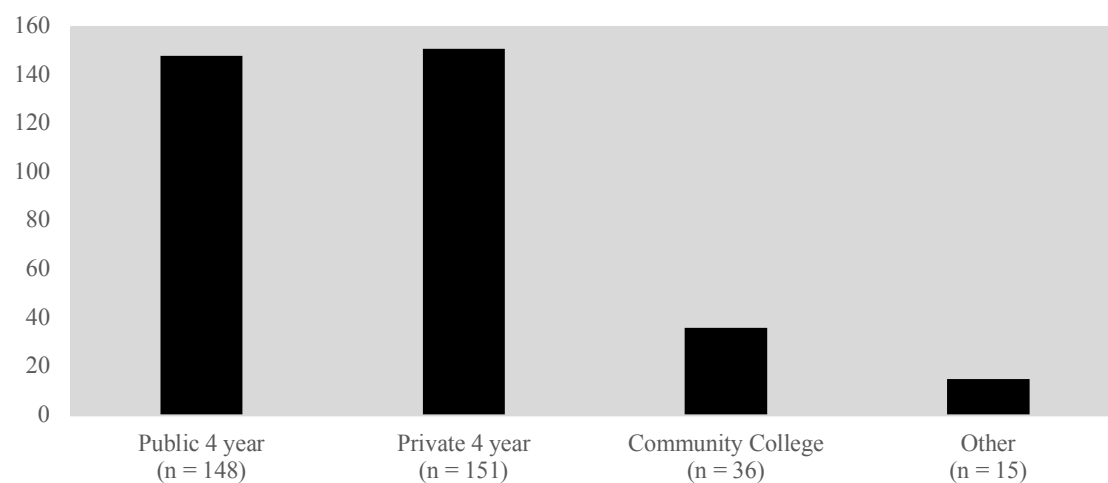


Figure 3.8. Frequency graph for type of higher education institution.

For the sample, the mean number of years of teaching experience was 25.1 ($SD = 11.46$), with the median also at 25 years. The range for years of experience was wide, from a minimum of 1 year to a maximum of 57 years. Participants were also asked to identify all grade levels at which they had any experience teaching, ranging from pre-K to graduate students. Because of the focus of the study, only three participants did not indicate teaching experience at the undergraduate level; 99% of respondents ($n = 347$) indicated having undergraduate teaching experience. Of the responses, 68% had teaching experience at both the undergraduate and graduate levels. Seventy-three percent ($n = 255$) had teaching experience for grades 9 through undergraduate, while 51% ($n = 177$) specified teaching experience for grades 9 through graduate. Forty-eight respondents (14%) indicated having experience teaching at the pre-K level. A listing of the frequencies for participants' grade level teaching experience is found in Figure 3.9.

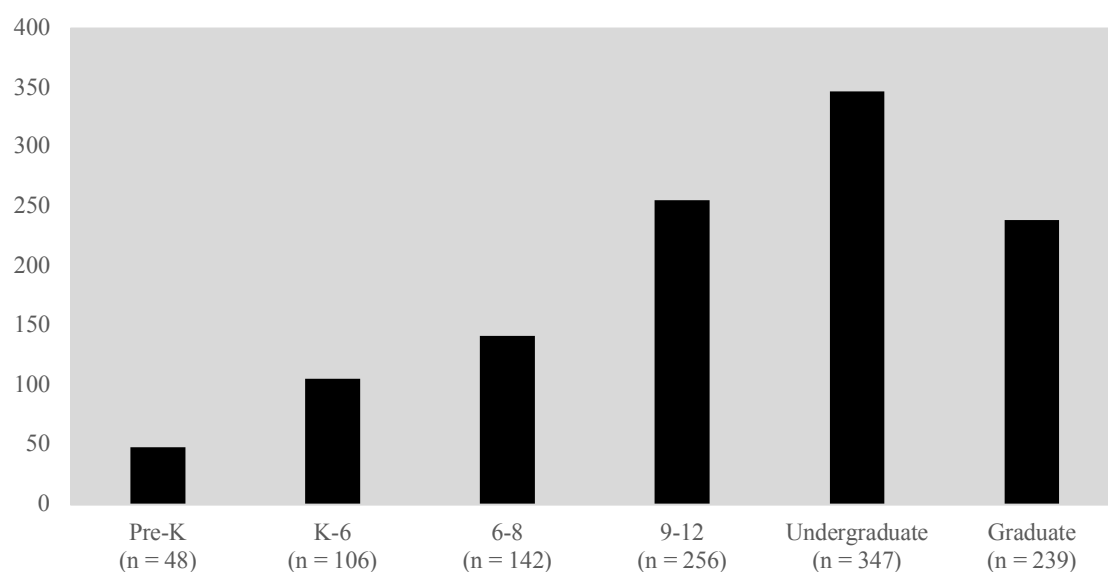


Figure 3.9. Frequency graph for grade level teaching experience.

Participants were also asked to identify the state or states in which they currently teach. For the purpose of analysis, the states were grouped into nine regions utilizing the CMS regional chapter groupings. Including only locations in the United States, Figure 3.10 identified the CMS regional chapters as listed on the organization's website.

<u>CMS Regional Chapters</u>	<u>States</u>
Great Lakes Chapter	MI, OH, IL, IN, KY, MN, WI, northeastern SD, eastern ND
Great Plains Chapter	NE, IA, KS, MO, southern SD
Mid-Atlantic Chapter	VA, WV, MD, NC, SC, District of Columbia
Northeast Chapter	PA, NY, VT, NH, CT, MA, ME, RI, DE, NJ
Pacific Northwest Chapter	northern CA, OR, WA, western MT, western ID
Pacific Southwest Chapter	AZ, HI, central and southern CA, NV
Rocky Mountain Chapter	CO, eastern ID, eastern MT, NM, WY, western ND, northwestern, SD, UT
South Central Chapter	AR, OK, TX
Southern Chapter	FL, GA, AL, MS, TN, LA

Figure 3.10 College Music Society regional chapter boundaries.

Responses were received from 47 states and the District of Columbia, resulting in all nine regions being represented in the data sample. Only the states of Alaska, Delaware, and South Dakota were not represented in the responses. The Great Lakes Chapter had the highest frequency with 22% ($n = 77$), followed by the Northeast Chapter at 19% ($n = 66$). Figure 3.11 presents participants' location based on CMS regions.

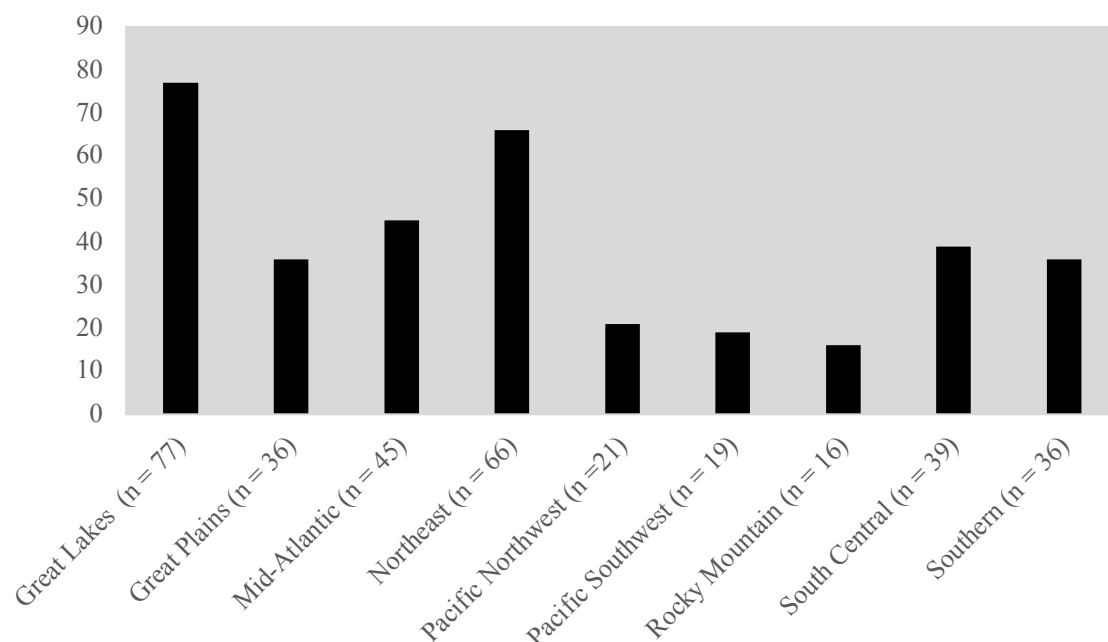


Figure 3.11. Frequency graph for participants' location by CMS region chapters.

Qualitative Data Collection

For the explanatory phase of the study, the qualitative methods used a phenomenological case study approach to examine the ways in which three survey participants were familiar with LTBTs for teaching singing and what experiences and training may have impacted the participants' perceptions towards LTBTs. Using purposeful sampling, the three participants were chosen based on responding positively to further study participation, being located within an accessible geographic range, and the participants' degree of importance and/or degree of favorableness score falling at or below the mean of the sample. Participants' highest held degree, years of teaching experience, and levels of teaching experience were also considered to help increase the potential for diverse experiences among the qualitative participants. A rich narrative of each of the three participants is presented in Chapter 5.

As identified in Chapter 1, the primary variable of interest for the qualitative phase of this study was:

How do collegiate teachers of singing use learning-theory-based teaching strategies to teach singing?

This question was answered by collecting data through both observation and interviews.

Additional research questions explored during the qualitative phase included:

1. What influences the perceptions of collegiate teachers of singing towards the use of learning-theory-based teaching strategies for teaching singing?
2. How do collegiate teachers of singing become familiar with learning-theory-based teaching strategies?

Data collection for the qualitative phase involved three sources to establish triangulation of themes. Individual interviews were conducted with each participant using Zoom—an online video-conferencing service. The semi-structured interview protocol (Appendix E) was developed following quantitative data analysis and focused on establishing participant familiarity with LT BTS and what training and experiences each participant had in teaching singing. Teaching materials, such as course syllabi, handouts, teaching notes, or primary teaching resources, were solicited as material evidence to corroborate emerging themes. Participants were video recorded teaching multiple students in order to assess how the participant may or may not be using LT BTS for teaching singing. A total of six lesson videos were transcribed—two representative lesson recordings per participant. Finally, a post-observation interview was conducted to examine how the participants had experienced or deliberately taught using LT BTS and to clarify any discrepancies between perceptual and observational data. Prior to beginning this phase, an

amended Institutional Review Board (IRB) approval was obtained for the study on November 20, 2017, with the initial IRB protocol #1106128-2 (Appendix F).

In the analysis of the qualitative phase, emergent themes were coded in the interview and video observation transcripts and identified in the teaching materials. The qualitative data analysis software *MAXQDA* was used to facilitate this process. Using the collected data, a rich description of each case study was written to highlight the individual lived experiences of each of the three participants. With a focus on the phenomenon of how teachers of singing use LT BTS for teaching singing, the data was examined to find the structure of the phenomenon, which “describes the common themes or essential parts from within the experience that identify the phenomenon and transcends the experiences of different individuals” (Mayoh & Onwuegbuzie, 2015, p. 95).

Merriam (2009) suggests eight strategies for promoting reliability and validity in qualitative research: triangulation; member checks; adequate engagement in data collection; researcher’s position or reflexivity; peer review/examination; audit trail; rich, thick descriptions; and maximum variation. Triangulation, as previously mentioned, occurred via the collection of three types of data. Member checks, researcher reflections, and advisor reviews were utilized to verify accuracy of observation data and interpretations. Since the researcher was the sole collector of data during the four-month process, a saturation of data by the researcher was established. The specific details of the data collection and analysis processes are shared in this chapter to establish consistency and trustworthiness of the findings. A statement of reflexivity is also included in chapter five to acknowledge the researcher’s relationship to the phenomenon. Finally, a rich description of each of the three diverse case studies is offered as a means to allow readers the opportunity to determine the degree to which the findings may be generalized to

other research. Identification of these reliability and validity strategies have been included as a means to verify the rigor of the qualitative research methods, which was identified by Creswell and Plano-Clark (2011) as a key characteristic of mixed methods research.

Mixed Methods Procedures

As a primary characteristic of mixed methods research design, the integration of quantitative and qualitative data sets occurred in multiple ways. By using an explanatory sequential design, data integration occurred in the intermediate stage when selecting case study participants and developing qualitative interview protocol. Additionally, the two data sets were compared in a separate conclusions section in chapter six to provide a more comprehensive explanation as to how collegiate teachers of singing view and use LTBTs for teaching singing. Therefore, the principal mixed methods research question to be answered was:

In what ways do the qualitative data describing the uses of learning-theory-based teaching strategies by collegiate teachers of singing help to explain the quantitative results about perceptions reported on the questionnaire?

Chapter Summary

The mixed method design of this study was used to examine the phenomenon in a way that may supply an understanding of both the broad and narrow landscape of how collegiate teachers of singing use LTBTs. As the study seeks to explore the uses of LTBTs, potential recommendations resulting from the descriptive analysis could help voice teachers add new student-centered approaches to teaching to those already being used and offer additional tools for meeting the needs of a rapidly changing student population. A further value of the study was to

identify the experiences and influences impacting the perceptions of teachers of singing towards LT BTS. Knowledge of these factors may guide curriculum decisions of vocal pedagogy and performance graduate programs by offering additional research on research-based methods of teaching singing. In so doing, theory and practice may become more interconnected and the results of the investigative process can perhaps enhance the profession of teaching singing.

CHAPTER FOUR

QUESTIONNAIRE ANALYSIS

Quantitative Results

As the primary variable of interest, the perception of collegiate teachers of singing towards the use of LT BTS for teaching singing (PLTBS) was measured using two scores: a summation of participants' scores for the 10 attitudinal statements and a summation of the participants' scores for the 10 importance statements. The mean attitudinal score was 53.3 with a standard deviation of 4.48, indicating a "very favorable" attitude. The mean importance score was 49.2 with a standard deviation of 4.80, resulting in a perceived high degree of importance. Tables 4.1 and 4.2 outline the distribution of participant responses for the attitude and importance statements.

Table 4.1

Frequency Distribution for Participants' Degree of Favorableness (Attitude)

Attitude Score	Classification	Frequency	%	Cumulative %
52 – 60	Very Favorable	231	66%	100%
44 – 51	Favorable	110	31.4%	34%
36 – 43	Somewhat Favorable	9	2.6%	2.6%
28 – 35	Somewhat Unfavorable	0	0%	0%
20 – 27	Unfavorable	0	0%	0%
10 – 19	Very Unfavorable	0	0%	0%
<i>N</i> = 350				

Table 4.2

Frequency Distribution for Participants' Degree of Importance

Importance Score	Classification	Frequency	%	Cumulative %
52 – 60	Extremely High Importance	110	31.4%	100%
44 – 51	High Importance	193	55.1%	68.6%
36 – 43	Moderate Importance	45	12.9%	13.5%
28 – 35	Slight Importance	2	.6%	.6%
20 – 27	Low Importance	0	0%	0%
10 – 19	No Importance	0	0%	0%
<i>N</i> = 350				

The relationship between participants' perceived degree of favorableness (DoF) and degree of importance (DoI) was explored using a Pearson Correlation coefficient. The conservative strength of correlation guide proposed by Evans (1996) was selected to use when describing the correlational results. Based on this guide, a strong, positive correlation of $r = .67$ was found, suggesting participants with a higher DoF score were likely to have a higher DoI score. This correlation was significant at the .01 level—strong evidence that the correlation did not occur by chance. Additionally, the coefficient of determination indicated 45% of the variance in participants' attitudinal score was determined by the participants' importance score. These calculations are included in Table 4.3.

Table 4.3

Correlation between Perception Scores for Variables DoF and DoI

		Variable DoF	Variable DoI
Variable DoF	Pearson Correlation	1	.666**
	Sig. (2-tailed)		.000
	N	350	350
Variable DoI	Pearson Correlation	.666**	1
	Sig. (2-tailed)	.000	
	N	350	350

** . Correlation is significant at the 0.01 level (2-tailed).

In addition to examining the correlation between participants' perceived degree of favorableness (DoF) towards LTBTs and the perceived degree of importance, a paired samples t-test was conducted to determine if the difference in mean scores for each variable was statistically significant. Unless otherwise noted, tests of significance utilized $\alpha = .05$. As seen in Table 4.4, the calculations [$t_{(349)} = 20.59, p = .000$] indicated the mean score for degree of importance was significantly lower than the mean for the degree of favorableness score.

Table 4.4

Paired Samples T-Test for Variables DoF and DoI

		Paired Differences						
		M						Sig. 2-
		difference	SD	SE of M	Lower	Upper	t	tailed
Pair 1	DoF – DoI	4.183	3.802	.203	3.783	4.583	20.585	.000

Table 4.5 lists the median, mode, corresponding percentage of the mode, and the percentage of “always” and “most of the time” responses for the frequency of use for each of the ten LTBTs as reported by participants. One of the strategies—providing high-quality models and/or demonstrations—had two scores represented in the mode; both scores were included. Results indicated all ten teaching strategies were reported by participants as used with at least a moderate frequency. The most frequently used teaching strategy was feedback, with 96% of participants reporting providing high-quality, specific feedback throughout the lesson, including praise for successes and redirection for errors most of the time or always. Based on the percentages of responses for “always” and “most of the time,” the next three teaching strategies most frequently used were teaching deliberate practice strategies (86%), breaking sections of repertoire into small chunks (85.1%), and setting goals collaboratively with a student (81.9%). The least frequently used teaching strategy as indicated by the lowest median and percentage of responses for “always” and “most of the time” was having a student perform an entire song without interruption during a voice lesson even if the student makes errors. One hundred and seven participants (30.6%) selected “never” or “sometimes” as the frequency of use for an uninterrupted student performance, which contributed to the lower median score as compared to the other 9 LTBTs. Selecting repertoire just beyond a student’s ability level also received a lower percentage of responses for “always” and “most of the time” at 52.4%, with 20% of respondents ($n = 60$) indicated “never” or “sometimes” using this strategy. Although teaching a student to be aware of what she is thinking had a mode response of always, this teaching strategy had the highest number of never responses at 9 responses (2.6%), which may indicate an area for investigation during the qualitative phase.

Table 4.5

Participants' Reported Frequency of Use for each LTBTs

Teaching Strategy	Median Score	Mode Score	Mode Percentage	% Response of "Always" or "Most of the Time"
1. Ask higher-order thinking questions	4	4	43.8%	62.8%
2. Prime challenging patterns in the repertoire	4	4	41.0%	63.9%
3. Break sections of repertoire into small chunks for mastery and then connect the chunks	4	5	49.9%	85.1%
4. Select repertoire just beyond the current ability level of the student while helping the student to learn the skills necessary to successfully perform the repertoire	4	4	39.3%	52.4%
5. Have a student perform the entire song without interruption during a voice lesson even if he makes errors	3	4	28.9%	42.7%
6. Provide high-quality specific feedback throughout the lesson, including praise for successes and redirection for errors	5	5	74.8%	96.0%
7. Teach a student to be aware of what she is thinking about her singing while she is singing	4	5	43.3%	76.5%
8. Teaching deliberate practice strategies	4	5	49.3%	86.0%
9. Providing high-quality models and/or demonstrations	4	4/5	67.6%	67.6%
10. Set goals collaboratively with a student	4	4	42.1%	81.9%

Note. The frequency question response scale used a 5-point scale with the following descriptors: "Never" (1), "Sometimes" (2), "About half of the time" (3), "Most of the time" (4), and "Always" (5).

Correlations were explored among participants' perceived attitude (DoF) and perceived importance (DoI) scores and all collected demographic characteristics except for location by states. Eta scores for correlations between undergraduate degree type, type of higher education institution, and variable DoF or variable DoI were found to be negligible. A weak relationship existed between participants' identified secondary teaching roles and perceived attitude scores, $\eta = .203$; no clear patterns emerged in the data, perhaps as a result of respondents being allowed to enter multiple secondary teaching roles. A weak relationship was also discovered between participants' secondary teaching role and the degree of importance score, $\eta = .217$. With 4.7% of the variance in the importance score determined by a respondent's secondary teaching role, this result was considered to be negligible. Similar weak relationships were calculated for both variables—DoF and DoI—and the levels of teaching experience as reported by participants. The teaching experience levels were found to have a larger effect on the attitude score ($\eta = .240$) when compared to the importance score ($\eta = .229$) and had a small effect size with 5.8% of the variance in the attitude score explained by the levels of teaching experience.

While highest held degree had little-to-no effect on participants' importance score, the relationship between participants' degree of favorableness and the highest held degree was found to be very weak, $\eta = .196$. Further examination of the relationship was conducted using a one-way ANOVA to compare the mean attitude score for participants with a specific highest held degree. Table 4.6 and Table 4.7 present the results of the ANOVA test, which were statistically significant [$F_{(3, 342)} = 4.55, p = .004$]. Scheffé post hoc comparisons found the mean attitude score for participants holding only a bachelor's degree was lower statistically than respondents with a master's or doctoral degree.

Table 4.6

Summary Data and ANOVA for the Effect of Highest Held Degree and Variable DoF

Highest Held Degree					
	Bachelor's	Master's	Artist Diploma	Doctorate	
<i>n</i>	5	125	11	205	
<i>M</i>	46.80	52.98	52.27	53.67	
<i>SD</i>	3.77	4.75	4.96	4.15	
Source	SS	df	Mean Square	F	<i>p</i>
Between Groups	263.362	3	87.787	4.547	.004
Within Groups	6602.474	342	19.305		
Total	6865.836	345			

Table 4.7

Scheffé Post Hoc Comparisons for the Effect of Highest Held Degree and Variable DoF

Highest Held Degree (I)	Highest Held Degree (J)	Mean Difference (I-J)	95% Confidence Interval	
			Lower Bound	Upper Bound
Bachelor's	Master's	-6.18400*	-11.8138	-.5542
	Artist Diploma	-5.47273	-12.1307	1.1852
	Doctorate	-6.87073*	-12.4581	-1.2833
Master's	Bachelor's	6.18400*	.5542	11.8138
	Artist Diploma	.71127	-3.1710	4.5935
	Doctorate	-.68673	-2.0876	.7141
Artist Diploma	Bachelor's	5.47273	-1.1852	12.1307
	Master's	-.71127	-4.5935	3.1710
	Doctorate	-1.39800	-5.2185	2.4225
Doctorate	Bachelor's	6.87073*	1.2833	12.4581
	Master's	.68673	-.7141	2.0876
	Artist Diploma	1.39800	-2.4225	5.2185

* The mean difference is significant at the .05 level.

Similar to the previous correlation, a very weak relationship was also found between participants' attitude scores and the reported primary teaching role, $\eta^2 = .173$. A one-way ANOVA was conducted to further explain this relationship. As seen in Table 4.8, the analysis produced a statistically significant result [$F_{(4, 345)} = 2.662, p = .033$]. Both the Scheffé and Tukey HSD post hoc comparisons were conducted to identify any significant paired comparisons. As can be seen in Table 4.9 and Table 4.10, neither test found the expected relationship. In order to determine if a Type II error had occurred, a test of homogeneity of variances was conducted and determined to be non-significant (Levene = 1.47, $p = .209$), which suggested the main effect was valid. As such, the failure of both tests to find a significant paired comparison may exist because of the small sample sizes for three of the five primary teaching roles.

Table 4.8

Summary Data and ANOVA for the Effect of Primary Teaching Role and Variable DoF

	Primary Teaching Role				
	Voice Teacher	Choir Director	Music Educator	Opera Director	Other
<i>n</i>	247	76	21	3	3
<i>M</i>	52.88	54.13	55.33	56.33	53.67
<i>SD</i>	4.65	3.77	3.98	3.51	5.86
Source	SS	df	Mean Square	F	<i>p</i>
Between Groups	209.599	4	52.400	2.662	.033
Within Groups	6791.289	345	19.685		
Total	7000.889	349			

Table 4.9

Scheffé Post Hoc Comparisons for the Effect of Primary Teaching Role and Variable DoF

Primary Teaching Role (I)	Primary Teaching Role (J)	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Voice Teacher	Choir Director	-1.24443	.336	-3.0468	0.558
	Music Educator	-2.45277	.208	-5.5761	0.6705
	Opera Director	-3.45277	.773	-11.4339	4.5284
	Other	-.78610	.999	-8.7673	7.1951
Choir Director	Voice Teacher	1.24443	.336	-0.558	3.0468
	Music Educator	-1.20833	.875	-4.5958	2.1791
	Opera Director	-2.20833	.949	-10.2965	5.8799
	Other	0.45833	1.00	-7.6299	8.5465
Music Educator	Voice Teacher	2.45277	.208	-0.6705	5.5761
	Choir Director	1.20833	.875	-2.1791	4.5958
	Opera Director	-1	.998	-9.4809	7.4809
	Other	1.66667	.985	-6.8142	10.1475
Opera Director	Voice Teacher	3.45277	.773	-4.5284	11.4339
	Choir Director	2.20833	.949	-5.8799	10.2965
	Music Educator	1	.998	-7.4809	9.4809
	Other	2.66667	.969	-8.5525	13.8858
Other	Voice Teacher	0.7861	.999	-7.1951	8.7673
	Choir Director	-0.45833	1.000	-8.5465	7.6299
	Music Educator	-1.66667	.985	-10.1475	6.8142
	Opera Director	-2.66667	.969	-13.8858	8.5525

Table 4.10

Tukey HSD Post Hoc Comparisons for the Effect of Primary Teaching Role and Variable DoF

Primary Teaching Role (I)	Primary Teaching Role (J)	Mean Difference (I-J)	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Voice Teacher	Choir Director	-1.24443	.206	-3.0468	0.558
	Music Educator	-2.45277	.109	-5.5761	0.6705
	Opera Director	-3.45277	.667	-11.4339	4.5284
	Other	-.78610	.998	-8.7673	7.1951
Choir Director	Voice Teacher	1.24443	.206	-0.558	3.0468
	Music Educator	-1.20833	.804	-4.5958	2.1791
	Opera Director	-2.20833	.916	-10.2965	5.8799
	Other	0.45833	1.000	-7.6299	8.5465
Music Educator	Voice Teacher	2.45277	.109	-0.6705	5.5761
	Choir Director	1.20833	.804	-2.1791	4.5958
	Opera Director	-1	.996	-9.4809	7.4809
	Other	1.66667	.974	-6.8142	10.1475
Opera Director	Voice Teacher	3.45277	.667	-4.5284	11.4339
	Choir Director	2.20833	.916	-5.8799	10.2965
	Music Educator	1	.996	-7.4809	9.4809
	Other	2.66667	.948	-8.5525	13.8858
Other	Voice Teacher	0.7861	.998	-7.1951	8.7673
	Choir Director	-0.45833	1.000	-8.5465	7.6299
	Music Educator	-1.66667	.974	-10.1475	6.8142
	Opera Director	-2.66667	.948	-13.8858	8.5525

Open-Ended Question Results

In addition to collecting data about participants' perceptions towards using LT BTS and specific demographic characteristics, respondents were given an opportunity to identify any additional strategies (besides the strategies mentioned in previous survey questions) they considered to be important tools for teaching singing. Since these responses were open-ended, the data was transferred to MAXQDA and coded by theme using the ten LT BTS and additional themes discovered in the data. Table 4.10 illustrates the frequency of coded themes; in total, 52.6% of the sample (n = 184) had coded responses to the question *Additional Teaching Strategies Used*.

Table 4.11

Frequency of Coded Comments for Question: “Additional Teaching Strategies Used”

	Frequency	%
Voice Science – Body and Kinesthetic Awareness	42	12.0%
LTBTS – Higher-Order Thinking Questions	29	8.3%
Expression – Artistry and Emotion	29	8.3%
Voice Science – General	28	8.0%
Awareness of Individual Student Learning Differences	24	6.9%
LTBTS – Modeling	15	4.3%
Vocal Technique	12	3.4%
Expression – Textually Based Knowledge	12	3.4%
LTBTS – Feedback	12	3.4%
LTBTS – Priming	11	3.1%
LTBTS – Metacognition	11	3.1%
LTBTS – Practice Strategies	10	2.9%
Voice Science – Resonance and Vowels	6	1.7%
LTBTS – Goal Setting	6	1.7%
LTBTS – Chunking & Chaining	6	1.7%
Actively Engaging Student in Learning Process	5	1.4%
Use of Imagery	5	1.4%
LTBTS – Complete Performance	3	0.9%
LTBTS – ZPD	3	0.9%

The most frequently coded theme for the open-ended question was related to helping students become aware of the body knowledge and physical sensations associated with a healthy singing technique (n = 42). Responses coded for this theme included providing students with a “strong anatomical knowledge/body awareness” (Participant ID: RD 162) and “body knowledge (understanding the structures and movements of singing)” (Participant ID: RD 269); these

concepts are often associated with the anatomy and physiology taught as the voice science aspect of vocal pedagogy. Several other responses discussed helping students increase awareness of the kinesthetic sensations through specific methods or a general focus of attention:

Teaching awareness of what proper production feels like - often young singers rely too heavily on their ears and not the feeling of proper breath and tone production. This leads them to panic in situations where they don't hear themselves as well, or when in performance/audition venues with different acoustics than the lesson studio/practice room. (Participant ID: RD 82)

Whole body awareness. It is not just about singing, the larynx, the mouth. The whole body is the instrument. I make sure my students are aware of their feet, the strength of their legs. I have them move. Music is movement. Standing still inhibits singing. Putting their arms out to the side, and up, also helps elevate the chest some, which enhances breathing, and inspires confidence. (Participant ID: RD 203)

Creating opportunities for students to "feel" what the correct technique feels like, e.g. lip buzzing exercises/other physical exercises to help the student feel what it means to use breath in a supported and sustained way (or any other element of technique). (Participant ID: RD 236)

Attention to alignment and balance issues as in Body-mapping and Alexander technique prior to warmups -- separation of musical accuracy coaching from technique work with their accompanist. (Participant ID: RD 1009)

Two respondents described this approach as helping students to develop muscle memory and indicated this process as an important strategy for teaching singing.

Twenty-nine additional teaching strategy responses (8.3%) were coded as strategies associated with the LTBTs of higher-order thinking, such as questioning techniques and analysis of performances. The use of questions was described as a tool for helping students to evaluate and explain how a change in technique was made. One respondent explained using a strategy of “being able to ‘teach me back’—having the student explain technical or musical concepts to me as if I were a beginner” (Participant ID: RD 34). Other responses provided rationale for the use of higher-order thinking as a tool in teaching singing:

When a student has a success in accomplishing a technique or diction change to better the sound, I find most helpful to ask them to recount what they did to accomplish it. By describing the sensation or adjustment, they hopefully can then reproduce the change once they leave the lesson. (Participant ID: RD 249)

In addition to high-quality feedback, helping the S become self-diagnosing, self-correcting and self-reflective is a priority. I believe in the research that says if a S only has external feedback s/he loses the ability to self-evaluate and correct - a huge part of the developing intentional practice routines. (Participant ID: RD 108)

Encouraging the student(s) to self-evaluate during lessons/rehearsals and to formally reflect on their practice strategies and progress in writing at least twice during each term. (Participant ID: RD 205)

While most coded responses for higher-order thinking were positive, one participant cautioned against too much thinking by stating:

Singing is a physical process much like an athletic skill. While thinking is obviously important, sometimes the process is simply physical and students can "over think." (Participant ID: RD 222)

In addition to technical aspects of singing, a theme emerged of teaching students to be expressive singers by developing emotional and artistic qualities. Among the 29 coded responses (8.3%), statements included a range of expressive aspects from examining the background of the text and characters to building performance presentation strategies. The following quotes offered insights into the reasons why the respondents believed this theme was an important aspect of teaching singing:

Researching the song - the story - the character. Understanding these elements are essential to appropriately understanding the style required and the cohesion of being a singer and an actor. If this connection is not made, the rest of the work will not matter in the industry. (Participant ID: RD 293)

I teach students about the things going on in their heads, like intellect, emotions, creativity, imagination, that are far more important than what's going on in their throats. A bad or average singing teacher can teach anybody to produce sound to some degree, but an excellent or Master teacher helps to develop thinking creative artists that just so happen to be singers. (Participant ID: RD 75)

Expressiveness. Technique alone is not singing. Good technique combined with expressive, artistic choices that communicate to a listener is singing. (Participant ID 109)

Because I Teach contemporary music we also go the next step of balancing technique with artistry. Sometimes breathy and raspy are desired qualities. My job is to help my students make informed choices that promote health and longevity in their singing without sacrificing their artistry. (Participant ID: 273)

While the concepts of artistry and emotional expression were indicated by participants to be important, specific teaching strategies or approaches for teaching this content were not provided.

The coded theme with the next highest response frequency at $n = 28$ (8.0%) was providing students with a general understanding of voice science concepts. Responses for this theme referenced basic knowledge of the anatomy, physiology, and function of the vocal mechanism. A respondent stated, "One should teach proper pedagogy and relaxation of the singing instrument" (Participant ID: RD 39). Another participant suggested using specific vocal pedagogy texts, such as those written by Ken Bozeman and Barbara Doscher. The following statements are representative of the remaining responses for the general voice science theme:

Teaching the student about vocal hygiene and vocal function. Teaching about registration and creating exercises to make sure a student's voice is balanced. Teaching the students the mechanics of breathing and how to apply that knowledge to get through phrases. Teaching a whole body approach that includes posture and Somatic reeducation to make sure the body is working efficiently and without tension. Explaining what resonance is (once the instrument is balanced) and to apply that knowledge so that songs are sung in an appropriate tonal quality for the genre to which they belong. (Participant ID: RD 1030)

It is essential that students have a very basic understanding of the physiology and anatomy of singing. Because so much of our pedagogy relies on visualization and metaphor, it is important students understand the physical basis for that approach. Asking a student to "place the tone above the head" is one way of asking them to learn to vault the soft palate and work toward a more efficient resonance model. Providing students with the justification for such seemingly ridiculous requests often makes them more open to trying what is asked of them and provides an explanation for the success of these techniques. (Participant ID: RD 30)

I approach the voice as an instrument involving the coordination of the entire body and give instruction based on anatomy and physiology to free the voice. Ways to free tensions in the jaw, tongue, swallowing muscles, neck, and face/mouth are addressed with specific massage and relaxation exercises as per the McClosky Technique. Alignment of the body based on the Alexander Technique is vital to maintain ribcage suspension for breathing and eliminate stress in the neck and throat. Releasing the abdominal muscles to enable a free inhalation and controlled use of these muscles on exhalation for breath flow to maintain vocal fold vibration is vital to achieve a balanced onset and and flow phonation. (Participant ID: RD 157)

Also, the physics of sound is most important to singing. Most vocal students have very little knowledge of how sound actually works, so I teach them as much as I can. It really helps them to understand singing and make changes faster. (Participant ID: RD 61)

Twenty-four participants (6.9%) indicated having an awareness of individual student learning differences when teaching singing. These responses were characterized by statements describing a teacher's need to know about the social-emotional, cultural, and academic background of each student in order to provide individualized instruction appropriate for each student's needs. This approach assumed students have different needs in the following coded statements:

I think it is vital to individualize one's teaching to take into consideration the student's personality and learning style or mode. For example, in some lessons I find it inappropriate to demonstrate too much because this particular student has a habit of mimicking as opposed to discovering their own unique sound. Flexibility in teaching is another important strategy because as a student's skill level and technique develop, I need to be able to make adjustments in my teaching to accommodate their progress. Taking this same example, as this student learns to find and rely on their own natural instrument, I would be able to provide more opportunities for models & demonstration. I think allowing students to make their own discoveries and connections is the most important strategy. I see my job as limiting the possibilities that allows them to find their way. I do this by providing as many tools for them as possible both during lessons (feedback, questions, exercises, encouragement & corrections) and when I'm not there (practice techniques, study resources/IPA, diction & accompaniment aids, ways for self-monitoring/video & audio resources). Only they know how it feels, so we need to work together to make them an independent artist. (Participant ID: RD 229)

I think it's definitely important for voice teachers to develop a keen sense of each individual student's understanding of voice concepts as we present them in lessons. We all know that each of us learns a little differently from each other and the sooner a voice teacher can figure out how to relate to each student he/she works with, the better the results down the road. Some students are difficult to read and I will be the first to say I don't have 100% success rate at getting through to every student I've taught, but I feel I've had a pretty good rate of success in knowing what works and what doesn't over time with each student I teach. (Participant ID: RD 86)

Trying to understand the psychological/emotional state of each student at each lesson in order to understand how hard to "push" a concept. Understanding that some students respond better to lots of praise than criticism, even when it is constructive. Understanding when to address specific technical challenges in relation to an upcoming performance event, ie, not pushing too hard on a technical goal a week before a recital. (Participant ID: 197)

One participant suggested individualization required “astute listening to students' statements and observation of their learning behaviors to indicate their levels of comprehension and mastery at every step of instruction” (Participant ID: RD 31). While another respondent simply stated, “study in educational psychology is extremely important” (Participant ID 46).

Beyond offering additional teaching strategies for the open-ended question, the researcher found four responses were noteworthy as general statements regarding the content of the questionnaire. One response for the question *Additional Teaching Strategies Used* articulated a possible disconnect between the traditional use of “vocal pedagogy” to label voice science concepts:

You've asked quite a few of these. I don't necessarily see how this related to Vocal Pedagogy... it's more teaching Pedagogy. (Participant ID: RD 43)

Two other participants offered a perspective on how and when LTBTs might be useful for teaching singing:

All of the listed strategies are quite important - but their relative importance depends on where things are in the rehearsal process. Singing things all the way through would not be as important until later in the process, when it becomes quite important. Even then, its importance (as opposed to "chunking sections") depends on how close the student is to mastery of transitions. (Participant ID: RD 1011)

You have covered most everything. Helping the student to recognize the difference between "better" and "poorer" technique and sound. Having the student learn "how" to guide his/her body to do something. These are probably covered under higher level things questions. I would mention that I use many (if not all) of these techniques as a choral conductor - particularly such things as breaking a song into sections for learning and then connecting the sections, approaching challenges by using critical analysis, using warmups to prepare for a specific challenge (musical or vocal/technical) in repertoire, singing whole songs (or even whole sections) without stopping even when there are problems, etc.... (Participant ID 153)

As a summation, a respondent offered the following quote as a response to the open-ended question: "Teaching voice is less about teaching the vocal instrument and more about training the brain" (Participant ID: RD 189).

Chapter Summary

As described in this chapter, the results of the quantitative phase of this study paint a broad picture of the perception of collegiate teachers of singing towards the use of LTBTs for teaching singing. The questionnaire data suggested all participants had a favorable attitude towards using LTBTs, and 99.4% of participants found LTBTs to be at least moderately important when teaching singing. Although both variables had positive results, participants were found to have a more positive attitude towards LTBTs than perceived degree of importance for using LTBTs. These results were also confirmed by participants' reported frequency of use for each LTBT. Participants reported high frequencies of use for providing high-quality feedback, teaching deliberate practice strategies, breaking sections of repertoire into small chunks for mastery, and setting goals collaboratively with the student. Having students perform an entire song without interruption even if errors are made and selecting repertoire just beyond the student's current ability level were reported to be used with the least frequency, but each strategy had a mode score of 4, i.e. "most of the time."

When correlations were conducted to determine which teachers may be more likely to possess positive or negative perceptions regarding the use of LT BTS for teaching singing, only weak and very weak correlations were found between demographic characteristics and participants' attitude and importance scores. Participants with a bachelor's degree as the highest-held degree were found to have a slightly less positive attitude towards LT BTS than those with a master's or doctoral degree. The grade levels of teaching experience reported by participants were also found to have the strongest of the weak correlations with both participant attitude and importance scores, but no clear trends were evident in the data. Although weak correlations were found, the significance is also limited by the small effect size for each correlation. Implications and possible explanations of these results are explored in chapter 6.

The questionnaire data also offered responses from an open-ended question in which participants were asked to provide any additional important strategies for teaching singing not mentioned as part of a previous survey question. Among the 184 coded responses, participant responses included both rewordings of the LT BTS mentioned in previous questions and other emerging themes. The most frequently coded non-LT BTS themes were body and kinesthetic awareness, expressive artistry and emotion, a general knowledge of voice science, and the teacher's awareness of individual student learning differences. Of the LT BTS, higher-order thinking questions had the highest frequency of codes followed by modeling, feedback, priming, practice strategies, and metacognition. These results suggested a potential disconnect regarding knowledge about LT BTS among teachers of singing and a lack of distinction between voice science and vocal pedagogy in the classical voice teaching profession. These emerging differences are explored further in the subsequent discussions of the three qualitative participants' lived experiences with using LT BTS for teaching singing.

CHAPTER FIVE

PHENOMENOLOGICAL CASE STUDY RESULTS

Based on the explanatory sequential mixed method design, the second phase of this study examined how three questionnaire respondents were familiar with, have experienced, and used learning-theory-based teaching strategies when teaching singing in an attempt to further explain the questionnaire results. In addition to the respondents' willingness to be a case study participant and their geographic accessibility to the researcher, the three participants were purposefully selected based on their highest held degree, the number of years of teaching experience, the range of grade levels taught, and their scores for degree of favorableness and degree of importance. Variety was sought to represent different perspectives when possible. Although gender was not a variable for this study, an attempt was made to have at least one male participant. Ultimately, no males were willing to participate, which resulted in three female case study participants. A pseudonym was selected for each participant as a means to protect anonymity. Following a reflexivity statement, this chapter offers a narrative regarding the lived experiences for each participant and a description of the themes that emerged from the data.

Whereas rigorous quantitative research should be designed to remove bias, qualitative inquiry may be contextualized in the experiences and perspectives of the researcher. Creswell and Poth (2018) state "all researchers shape the writing that emerges, and qualitative researchers need to accept this and be open about it in their writing" (p. 228). Based on this recommendation, a statement of reflexivity is provided before the description of the participants' lived experiences in an effort to situate the chapter within the researcher's perspective used during the writing and analysis process. This statement breaks from use of the formal third person voice to present the narrative in first person.

Statement of Reflexivity

My experiences as a musician have always been multifaceted. As soon as I could be in the school instrumental program, it became a priority to be involved in both the choral and instrumental programs during my middle and high school years. When I went to college, it seemed logical that I would complete both the vocal and instrumental music education degrees. Even though I would have likely chosen vocal music education if forced to choose between the two, both sets of musical experiences were formative and provided equally important influences on my development as a musician and educator.

It was during my undergraduate experience that I became fascinated with the idea of teaching voice. The first glimpses of how the voice worked in my undergraduate vocal pedagogy course sparked a desire to later complete a Master of Arts in Music Pedagogy-Voice degree rather than a graduate degree in music education. In teaching private voice and secondary choral music simultaneously, I developed a philosophical approach that centered on strengthening individual singers as a way to improve the whole ensemble. This philosophy was reinforced through the vocal pedagogy master's degree and additional secondary choral teaching following the completion of the degree. As a result, I viewed myself as equal parts choral music educator and voice teacher.

At the completion of nine years of teaching at the K-12 level, I was fortunate to be offered a university faculty teaching position as a music education specialist. This was partly a result of the diversity of teaching experiences during those nine years. In addition to teaching music education courses and directing a women's chorus, I was given a load of 10-12 undergraduate voice students and responsibility for teaching the Diction for Singers course, which further solidified my dual teaching roles. I quickly discovered in my collegiate teaching

that my experiences and training as a voice teacher helped me to be a more insightful music teacher educator and my preparation and experiences to be a music educator had a significant impact on what I did in the voice studio. To remove one set of experiences felt as though it would have hindered my ability to be effective in the other area. Additionally, sitting at the intersection of two closely related disciplines seemed to provide a different viewpoint when talking with colleagues whose training was in only one of the areas. While the duality of my experiences is not unique to me, it provided an uncommon perspective used to explore this research topic.

As this study is a reflection of my multifaceted experiences, it was based on the following assumptions:

1. Teaching is a combination of science and artistry. The science of teaching can provide a framework for learning, while the artistry allows for the flexibility necessary to adapt to the diversity of the human component in teaching and learning.
2. In the same way the field of voice science can offer a richer understanding of how the voice works to choral music educators, the science of teaching clarified in the field of music education can offer diverse insights into how to teach voice.

By examining how we teach voice through the lens of a music educator, I have come to better understand the multifaceted dimensions—both the science and artistry of teaching—found in my own practice.

Case Study Participant A: Sarah

As the daughter of an active piano teacher and collaborative pianist, Sarah was around music and music teaching from a very early age. Rather than be put off by that exposure, she

earned a Bachelor of Science degree in vocal and piano performance, a Master of Music in vocal performance, and a Doctor of Musical Arts (DMA) in vocal performance with a related field of vocal pedagogy. During the course of ten years, Sarah taught voice lessons at six different institutions of higher education in addition to teaching high school students in a private studio. At the time of this study, she was in her fourth year as a voice faculty member—fifth year working for the university—at a small, private, liberal arts institution located in the Southern Regional CMS chapter. After an initial year serving as a full-time collaborative pianist, her typical teaching load for an academic year included a one-semester vocal pedagogy course and applied voice students from all music majors offered: vocal performance, musical theatre, music education, and sacred music. These experiences allowed Sarah to teach a wide-range of students, including high school students preparing for All-State auditions, vocal performance and musical theatre undergraduate students, and a Master of Music Education student wanting to refine her vocal technique as she prepared to return to the classroom following a hiatus from teaching. It was this context of experiences that resulted in her “very favorable” attitude and “moderately important” importance scores on the questionnaire.

When asked to describe her training to be a voice teacher, Sarah discussed the vocal pedagogy courses she took during her academic career. Her undergraduate vocal pedagogy course—as best she could remember—consisted of a hybrid vocal pedagogy and vocal literature emphasis, with perhaps some diction added in as well. For her master’s vocal pedagogy course, she remembered the concentration being more hands-on and focused on the application of basic things she was experiencing in the voice studio as a student of the pedagogy teacher. She described the benefit of this approach in the following way:

I was able to kind of get other perspectives from the other students and seeing them work in the little bit of kind of practice teaching that we did in there. I was also in my first year

as a graduate teaching assistant and flying by the seat of my pants. I was terrified. Kind of absorbing information from the rest of my classmates was really helpful. And then seeing (the pedagogy teacher) talk about things that we talked about but in different words with some of the other... and seeing them take her ideas and her words and her, you know, encouragement and speak in their own language... That helped me kind of find my bearings a little bit... (Pre-Observation Interview, December 19, 2017)

As the related field for her DMA degree, Sarah's doctoral-level vocal pedagogy coursework included courses in the technical aspects of the anatomy, physiology, resonance, and acoustical properties of the voice and a historical overview of vocal pedagogy. To fulfill the additional coursework required through the Speech-Language Pathology program, Sarah took a voice disorders course. She described this as her favorite course because it was an opportunity to "get the perspective of non-classical singers, or non-singers at all, and being able to talk back and forth about the things that we had in common that we needed to know and the different ways we would use them" (Pre-Observation Interview, December 19, 2017).

In addition to the coursework, Sarah's teaching approach was influenced by the teachers she worked with during her master's and doctoral work. As previously described, her master's voice teacher encouraged Sarah to develop an awareness of the need to use language that speaks specifically to each student's way of processing information. By contrast, her doctoral vocal pedagogy professor provided Sarah with the detailed scientific information she had longed for as an undergraduate student.

We started talking a lot about like the acoustics of vowels and the way the acoustics of sound and overtones and how that all works and you know all the magic buzzword terminology that we all absorb and can spout off but don't know what they mean. I started to absorb what they actually meant and I was fascinated. I was so excited. This was what I wanted when I was an undergrad. (Pre-Observation Interview, December 19, 2017)

It was her doctoral voice teacher that helped Sarah to recognize the combination of these two aspects and the impact of teaching on her own personal performance.

(She) told me that when you start teaching is when you'll really realize... You'll really start to learn about how things work in your own performance and practices will start to solidify. Anyway, and she was right. And you know not just on a vocal level, but on that pedagogy and, you know, the classroom teaching and in the hands on... (Pre-Observation Interview, December 19, 2017)

Sarah's approach to teaching a vocal pedagogy course reflected these experiences and influences. As stated in the course syllabus student outcomes, the purpose of the single semester course was to help students be able to "demonstrate knowledge of the anatomy and physiology of the voice, acoustics of the voice, descriptive aspects of the singing voice, and voice classifications" and "demonstrate methods of helping a voice student establish sound singing technique" (Syllabus S18 Vocal Pedagogy, January 29, 2018). These outcomes aligned with Sarah's stated goal of "the biggest thing for me is understanding the anatomy and the non-laryngeal anatomy that affects the laryngeal and how that affects singing that we don't necessarily think about" (Pre-Observation Interview, December 19, 2017). For the course, Sarah has used two texts as resources: McCoy's *Your Voice: An Inside View* and Rundus' *Cantabile: A Manual about Beautiful Singing for Singers, Teachers of Singing and Choral Conductors*. The McCoy text was used for the first two semesters of teaching the course because of Sarah's familiarity with it. However, the *Cantabile* textbook was selected to use in subsequent semesters because of a specific section in each chapter that offered insights to choir directors, which was appropriate for the majority of students taking the course who were music education majors. Providing the same information to future choir directors and voice teachers was another important aspect of the vocal pedagogy course identified by Sarah.

Although the experiences and influences previously described provided Sarah with a solid foundation in how the physical instrument of the voice works and the need to have a variety of teaching tools to aid individual students, Sarah's familiarity with LTBT terminology was

limited. Sarah's response to being asked to define LTBTs was, "I don't know. I didn't really even know that was a thing until I took your questionnaire" (Pre-Observation Interview, December 19, 2017). Upon further reflection, Sarah offered a possible explanation by saying, "what the individual student needs to learn their best and being able to capitalize on that" (Pre-Observation Interview, December 19, 2017). Similarly, when asked to describe any experiences with the educational learning theories of behaviorism, cognitivism, and constructivism, Sarah responded that the words sounded familiar, but that she had no experience with them. Rather, she wondered if these theories were associated with the idea of visual, aural, kinesthetic, and tactile learning modalities. During the post-observation interview, Sarah also found it difficult to identify how she had experienced or utilized the teaching strategies of higher-order thinking questions, zone of proximal development, priming, and metacognition prior to being given an explanation of the terminology. Once given an example or explanation, she was able to connect her teaching practice and experiences as a student to each of these teaching strategies.

Although Sarah was not familiar with LTBTs terminology, she was observed using several different LTBTs in both the vocal pedagogy course and voice lessons. The content for the vocal pedagogy course on the observation day focused on the anatomy of the larynx. During this lesson, Sarah frequently used lower-level thinking questions by asking students to identify specific cartilages, bones, and muscles. In addition, higher-order thinking questions were utilized when Sarah would ask students to consider how the action of a specific muscle would impact pitch, timbre, or intensity of the voice. A hands-on in-class learning activity also required students to connect information primed through previous reading, the day's lecture, and in-class discussion by building a model larynx out of clay.

In the context of voice lessons, Sarah's most frequently observed teaching strategies were modeling, feedback, and higher-order thinking questions. Modeling was employed often during the lesson with a senior vocal performance major, perhaps because Sarah was trying to help establish a more consistent tone quality throughout the student's range or because the student was female. In all observed lessons, Sarah was typically enthusiastic in her praise of successful student attempts and specific in her prompts for helping students make adjustments to their singing. One method used by Sarah for encouraging retention of student success was by asking students to analyze the sensations felt during a successful performance or to consider what to do differently when the desired result did not occur. On two occasions, Sarah asked a student, "Ok, so what can you do to not do that? What can you do instead? It's not enough to say, 'Well, don't do that.' What do you do instead?" (Student 2 Lesson, February 2, 2018). In a similar discussion, Sarah asked both Student 1 and Student 2 to engage in metacognition by asking that each student be aware of how they were thinking about a phrase and to use the mental image of placing the next vowel in front of the previous one to help maintain a forward release of the tongue. Whereas metacognition was used in this situation with both students, metacognition was not recorded as consistently as the strategies of modeling, feedback, and higher-order thinking questions.

Other LTBTs—chunking & chaining, zone of proximal development, and priming—were also observed in Sarah's recorded voice lessons. Chunking & chaining was used to help each student isolate specific issues—such as consistency of tone in a phrase or navigating multiple register shifts in a melismatic passage—before putting the phrase back in the context of a larger section of the song or aria. In a similar way, priming occurred when Sarah asked Student 1 to sing a phrase on a single [i] vowel and then [o] vowel to help the student identify the desired tongue placement prior to asking the student to sing the phrase with text. Use of the zone of

proximal development was observed with Student 3, a freshman musical theatre student who was singing a song in a style outside of his scope of performance experience. As a result, Sarah spent time helping the student identify when he was adding scoops to phrases, which he had not been able to recognize without her help.

The remaining LT BTS of having a student perform an entire song without interruption, setting goals collaboratively with the student, and teaching deliberate practice strategies were not directly observed in any of the voice lessons or the vocal pedagogy course. When given an opportunity to describe any experiences with these three strategies, Sarah's singular response to a student's full performance without interruption was, "That's hard for me" (Post-Observation Interview, January 23, 2018). Her responses to how she used collaborative goal-setting and deliberate practice strategies in her teaching appeared to be interconnected. She described recently requiring students to keep a practice journal in which "they map out their time, set goals for each session, write down what worked or didn't" (Follow-up email, February 25, 2018). In the students' lessons, she explained how she would help students with the issues discovered in the students' practice and collaboratively develop short- and long-term goals for addressing the specific technique, repertoire, or artistic needs.

Although Sarah's experiences had not given her prior exposure to the terminology of LT BTS, Sarah was observed using seven of the 10 strategies in multiple contexts and recognized how the strategies were used after being given an explanation of the unfamiliar terminology. Her interest and excitement about learning more about the LT BTS was articulated when she stated, "I'm going to go research, you know, the differences between learning modes and behaviorism and cognitivism and constructivism" (Post-Observation Interview, January 23, 2018). Perhaps her overall positive response to LT BTS on the questionnaire and growing awareness of how they

are used could be summed up by her concluding statement, “just knowing that these ideas exist helps my brain.”

Case Study Participant B: Elizabeth

According to Elizabeth, the process of teaching voice is best learned through the act of teaching. This philosophy is perhaps a result of her own experiences. Her higher education academic career began with a Bachelor of Arts degree in music. Following the completion of this degree and before entering graduate school, Elizabeth took an interim year to work for her undergraduate voice teacher as an assistant and accompanist. This experience, although not a formal mentorship, provided her with glimpses of the inner workings of teaching voice. During her work towards a Master of Music in vocal performance, Elizabeth was required to take a vocal pedagogy course. She described that course in the following way:

You know we learned about the voice to some extent. It was in the 80's, so there was less detail, I guess, that was covered. As far as the teaching went in that case, it was one of those where it was find somebody who's willing to come in and teach them in front of the class for 15 minutes and you know we talk about. You know, I certainly didn't feel like I knew how to teach after that. (Pre-Observation Interview, January 3, 2018)

Following the near completion of a second master's degree in musicology, she and her husband took jobs at a university where she taught voice and literature courses. It was at that moment in time—when she was helping her husband with a growing voice program—that she described the beginning of her voice teaching and having to learn to teach by simply doing it.

After only a few years at the first university, Elizabeth's husband was offered a position at a different institution. At the time of this study, it was this second institution—a small, private, liberal arts women's college located in the Mid-Atlantic CMS chapter region—at which she had been working for 20 years. Her original position at the college was as the director of a pre-college community music school, in which she managed the program and taught private voice

lessons. Within a couple of years, Elizabeth was asked to take over teaching the two semesters of vocal pedagogy for the college program following the retirement of a colleague. When her husband left teaching to become a lawyer, she took on more collegiate voice students to help cover the voice teaching he had previously been doing. Eventually, Elizabeth was given an opportunity to complete a Doctor of Musical Arts in vocal performance at a university within the state. Because she continued her work for the college while completing the degree, her doctoral work did not include any vocal pedagogy coursework; the program coordinators waived the requirement because of how much teaching she was already doing. At the time of the study interviews and site visit, Elizabeth was in her fifth year as a full-time faculty member. Her typical course load continued to include the vocal pedagogy courses, director of the community music school, and both undergraduate and graduate voice students. As a result of these experiences, Elizabeth had taught a diverse age range of students throughout her 25 years of voice teaching, from six years old through graduate and older adult private students.

Teaching the vocal pedagogy courses was another learn by doing experience for Elizabeth. When she took over the classes, the primary focus “was to cover the basic anatomy and physiology things and to have them be doing teaching and getting feedback on that” (Pre-Observation Interview, January 3, 2018). Since she felt her master’s vocal pedagogy course had not prepared her well for teaching voice, she equipped herself to teach the course through reading and experimenting. Over the 20 years of teaching the course, Elizabeth has developed a two-track approach:

One track is we're learning the art of the voice and how it works and how the body functions. The scientific aspects of that is one track and then simultaneously we're doing a track of how to manage a lesson and what do you want to find out about a student early on and what you want to convey to them and how you do things differently with a third grader and a college student. And sort of management things: picking repertoire, how to

do a lesson when you don't play the piano... (Pre-Observation Interview, January 3, 2018)

In addition to this two-track approach, Elizabeth found that she could cover the anatomy and physiology in a single semester, which allowed her to cover additional topics in the second semester. These topics included historical perspectives of vocal pedagogy, vocal health issues, and the use of technology in teaching singing. As can be seen in Figure 5.1, these priorities were corroborated in the syllabus for each semester of vocal pedagogy.

MUE 341 - Vocal Pedagogy I, Fall 2017

COURSE LEARNING OBJECTIVES:

- Objective 1.* To teach the basic anatomy and physiology of the vocal instrument.
- Objective 2.* To give instruction in managing voice lessons for students of various ages.
- Objective 3.* To teach students to efficiently and effectively convey appropriate information on the workings of the voice along with artistic and stylistic aspects of singing and performing as they instruct beginning voice students.

MUE 343 - Vocal Pedagogy II, Spring 2018

COURSE LEARNING OBJECTIVES:

- Objective 1.* To instruct class members in continuing to develop their management of voice lessons with beginning or more advanced voice students and in eliciting improvements in vocal technique, performing skills, and artistry.
- Objective 2.* To teach students to use and evaluate different approaches to a technical vocal issue.
- Objective 3.* To introduce students to different approaches to vocal pedagogy by historical and 20th century voice teachers.

Figure 5.1. Course objectives for MUE 341 & 343.

For the first several years, Elizabeth used Doscher's *The Functional Unity of the Singing Voice* as the textbook for the class. Later, she changed to McCoy's *Your Voice: An Inside View* and most recently, switched to the basics version of McCoy's book titled, *Your Voice: The Basics*. Elizabeth also added Blades-Zeller's *A Spectrum of Voices* as a resource for familiarizing students with different approaches to specific vocal technique issues. While Elizabeth viewed

these texts as important, she also valued the practical applied teaching component of the courses. She recognized that it is in these moments that the students are able to apply their growing knowledge of the voice and learn by doing much in the same way she had done.

When asked to describe significant influences on her teaching approach, Elizabeth was quick to identify a recent experience from the previous summer—attending The Naked Voice Institute, conducted by W. Stephen Smith. She stated the experience was “just absolutely transformational for me” and had changed her teaching in significant ways (Pre-Observation Interview, January 3, 2018). When asked to articulate those changes, she made the following observations:

What changed in my overall approach, in a pretty significant way with Steve was... knowing what happens when you sing well is not the same as what you do in order to sing well... But learning with his approach some very simple and very specific things, which happen to be not the same things that I had been taught and heard a lot, particularly with keeping the back of the tongue high and knowing that it's that by feeling your tongue touching your top teeth while your jaw is dropped. All of that is a specific thing. Do this specific thing and now your jaw is not tense. And you're able to reproduce that or do it again by doing the same thing. And we've gotten the result that we wanted which is not tensing the jaw. So, it's in that way the goal changed, in that I didn't realize that was a goal I wanted. Of keeping the tongue high and avoiding that pressing down on the larynx and because of that everything has gotten easier for me and for all my students. But a lot of the other goals that I already had and was trying always to convey, were happening now as a result of that. So that in the large sense, the goals didn't change. But it's just a much more efficient and effective and easier to understand way of getting there. (Post-Observation Interview, February 1, 2018)

While observing Smith use a specific instructional sequence at the institute, Elizabeth realized his approach was effective for each student regardless of the student's ability level; it was “productive and helpful and forward moving for all of them and you don't have to think of some new thing every day.” As a result, she modified her attention during each lesson. This was observed in her teaching through a two-pillar focus with each student on tongue position and a free-flowing air stream. Because of this focus, she used a similar series of vocalises—spoken

exercises that lead into sung exercises—at the beginning of each observed lesson as a means to help the students produce her desired goal of a natural and easy sound.

Elizabeth's informal voice teaching training had not exposed her to specific terminology associated with LTBTS. Although she was not able to provide a definition for LTBTS, she described being conscious of how different people learned as early as when she was in the second grade. In fact, she stated, "I care about it a lot, even if I don't know about the theory" (Pre-Observation Interview, January 3, 2018). This was also evidenced in her lack of formal exposure to the three learning theories, but ability to reason possible meanings based on the root word of each learning theory. The pattern continued with four of the LTBTS—higher-order thinking questions, zone of proximal development, priming, and metacognition—during the post-observation interview as she required an explanation or definition for this terminology prior to being able to identify specific ways she used the strategies in her teaching. When asked to specify how she learned to include these strategies in her teaching, she indicated that she could not remember any training, but suggested that much of it she had to figure out on her own or by observing other teachers use of the strategies.

In examining her familiarity and use of specific LTBTS, Elizabeth was most familiar with modeling, providing high-quality feedback to students, and chunking & chaining. She was observed using all of these strategies with each student as a means to isolate specific phrases or technical outcome, to provide students with an aural example of the desired outcome, and to encourage students when they successfully achieved the outcome. In discussing the role of modeling in voice teaching, Elizabeth was quick to respond that it should be used judiciously, but that she could not imagine teaching without being able to provide high-quality models for her students. She also mentioned that she would use models of exaggerated student performances as

a means to help students recognize how a change could be implemented. No specific use of modeling in this way was observed during the site visit.

During the observed lessons, Elizabeth asked students many questions about their performance, what it felt like, and what they were thinking about. While some questions were lower-order thinking questions, Elizabeth also engaged students in higher-order thinking questions through analysis and comparison. During a lesson with a 14-year-old male, she asked the student to consider why a consonant was used in an exercise and later to compare the text of the two songs he was learning. This student also engaged in metacognition following the performance of a song when he described for the teacher specific things he noticed about the performance without being prompted. Elizabeth articulated the value of using higher-order thinking questions as it helps the students to “figure it out as opposed to me telling them three or four weeks in a row” (Post-Observation Interview, February 1, 2018). She had recognized during her 25 years of teaching that “students will get that better if they figure it out themselves.” In a similar way, she suggested asking students to talk about what they are thinking about while singing was important because what she thought they were thinking about was not necessarily accurate. Ultimately, she viewed these two LT BTS as useful tools for building independent musicianship.

As previously stated, Elizabeth needed an explanation for priming and the zone of proximal development prior to being able to talk about how she used each LT BTS. Although neither strategy was explicitly used during the observed lessons, she recalled frequently using vocalises to prepare students for a difficult pitch on a specific vowel as a priming tool. She also mentioned talking about this strategy with vocal pedagogy students who may be struggling with a practical applied student being afraid of a high note. Regarding use of the zone of proximal

development, she identified her possible use of this strategy in two ways. First, she mentioned the requirement of students to keep a weekly journal. During a weekly review of the journal, Elizabeth made recommendations of things to do beyond what the student is already doing in order to advance the learning process. She also mentioned the role of the weekly studio class as an opportunity for students to learn from each other and push each other beyond what they might do on their own.

The final three teaching strategies—using a full performance, collaboratively setting goals, and teaching deliberate practice strategies—were each viewed positively by Elizabeth. In addition to seeing her ask each student to give a full, uninterrupted performance in the observed lessons, she stated,

I don't always do that but I will often do that because you can see the full picture. You can see if they have the whole thing learned, if they have the whole thing memorized, whatever you're working on. But I think it's important to have that experience of singing it all the way through. (Post-Observation Interview, February 1, 2018)

As she described in the post-observation interview, Elizabeth asked students to set goals at the beginning of each semester based on what was accomplished the previous semester. These goals were monitored in the required journal and were even referenced at the start of one of the observed lessons. The goals and journal were used in a way that provides a structure for giving the students specific practice strategies in order to reach the goals and develop independent musicianship.

Although the interviews and observations revealed Elizabeth viewed the LT BTS positively and used many of them in her teaching, her responses to the questionnaire resulted in an attitudinal score in the “very favorable” range and an importance score near the bottom of the “moderate importance” range. During analysis, the qualitative data did not appear to support the 14-point difference between the scores from the quantitative data. In order to better understand

this potential disconnection, the researcher asked Elizabeth about what she thought might be the reason for the lower degree of importance score. Her response was:

I think what I was thinking about that was not wanting to say everybody should do these things. I think I was thinking more in terms of this is a lot of really useful stuff. And each teacher will use them in a different, maybe a combination. And some people will use them more than some will. And I think that kind of harkens back to my teaching of my pedagogy, which is trying to not prescribe this is what you must do, you must do these things, but you must find a way that works that you and your students feel comfortable and lets them progress in a way that you're both happy with it. (Post-Observation Interview, February 1, 2018)

Case Study Participant C: Rachel

When Rachel began college, she wanted to be a high school band director. During her first year of undergraduate studies, she also took voice lessons and discovered that her musical passion lay more in the area of voice than instrumental music education. As a result, she changed her major during her freshman year and graduated with a Bachelor of Arts degree in music with a minor in French. Recognizing that she would need graduate studies in order to be able to teach voice at the collegiate level, Rachel also went on to complete a Master of Music in vocal performance. It was during the completion of these two degrees that Rachel received what she described as “not much vocal pedagogy training” (Pre-Observation Interview, January 8, 2018).

Even though the vocal pedagogy course was not required for her bachelor’s degree, Rachel took the course because she already knew she wanted to teach at the university level. For this course, the teacher used McKinney’s *The Diagnosis & Correction of Vocal Faults: A Manual for Teachers of Singing & for Choir Directors* and a collection of articles from the *NATS Journal of Singing*. Reflecting on the course, Rachel explained the focus of the course as being the anatomy and physiology of the voice, an exposure to a variety of methods resources, and information about determining the Fach of young singers. The course also had a practice

teaching component that Rachel found valuable because she “made more progress after taking that class than [she] ever did before” (Pre-Observation Interview, January 8, 2018).

During her master’s coursework, the rotation of the course fell at a time preventing Rachel from being able to take the optional vocal pedagogy class. Recognizing her professional goals, Rachel explained how her voice teacher “threw in a whole lot of pedagogy things” in her voice lessons. She portrayed her graduate voice teacher’s teaching approach in the following way:

They were very much more on the sensation side of things as opposed to the science side of things. And so, she really took me in-depth in pulling out those types of sounds you're looking for but more through the imagery and through the support of the body and the breath as opposed to, you know, you need to relax the cricoids and all of those things. (Pre-Observation Interview, January 8, 2018)

Rachel attributed this approach—of focusing on the physical sensations of singing created through artistry and emotion—to the influence of Martial Singher, with whom two of her graduate instructors had studied. It was during this time and through directing her attention on the physical sensations that Rachel recalled experiencing significant growth in her voice. As a result, she identified how she was taught in her master’s program as being the most significant influence on her teaching style.

At the time of this study, Rachel was in her 11th year of adjunct teaching at a mid-sized, public institution located in the CMS South Central regional chapter. In addition to teaching for this institution, Rachel had simultaneously taught at another institution in the state for six of those years—four years at another public institution and two years at a private institution. This experience combined with some private teaching had allowed her to work exclusively with high school and undergraduate students. Rachel’s typical teaching load at her primary university included a voice studio of approximately 10 major and non-major students and a section of class

voice for instrumental music education majors taught in the fall semester. As she described, this course was designed to provide instrumental students with skills for building a healthy vocal technique in a choral setting since students completing this degree were licensed to teach both vocal and instrumental music. Those goals were more specifically articulated in the course syllabus, as presented in Figure 5.2.

COURSE OBJECTIVES

Students who successfully complete MUS 2441 should have a basic understanding of vocal mechanism function including anatomy of the vocal instrument and the physical processes involved in the act of singing; be able to match pitch and sing in the correct octave; be able to sing vocal exercises on solfege, neutral syllables and/or vowels; be able to learn a song with correct rhythms, pitches, phrasing, and diction; become proficient at singing one's part in choral music; and be able to recognize healthy, correct vocal habits and good vocal health in themselves and others. These objectives will be achieved through readings, demonstrations, listening assignments, group and individual practice and performance.

Figure 5.2. Course objectives for MUS 2441.

Whereas Rachel considered her voice teacher training to be limited, her responses on the questionnaire indicated her perceptions of using LT BTS for teaching singing to be “very favorable” and of “extremely high importance.” A potential dichotomy was further exposed when asked to talk about LT BTS and how she may have experienced these strategies. Her response to being asked to define LT BTS was, “I’m not really sure to be honest” (Pre-Observation Interview, January 8, 2018). Additionally, she could not explain or identify any formal training in specific learning theories but rather felt that “being able to read people and being able to understand their behaviors” was “a God-given talent” (Post-Observation Interview, February 12, 2018). To further understand how she may have developed a positive perception towards LT BTS without any formal knowledge, she was asked to describe her experiences with each strategy and her teaching was observed to determine how she used the strategies.

When asked about her teaching, Rachel felt as though her strengths were in asking her students questions to get them to think about what they were doing and providing balanced feedback—both criticism and compliments—following a student performance. In terms of asking her students higher-order thinking questions, she identified two specific uses. First, she described how the required song study and character study assignments (Appendix G) engaged students in lower-order thinking and higher-order thinking, respectively. Second, she believed using questions during the lesson was an effective tool in the learning process when used “to help them to come to that conclusion as opposed to just saying this is what needs to be done” (Post-Observation Interview, February 12, 2018). Additionally, she recognized that she “always provide[s] feedback and probably too much at times.” Although she was observed frequently providing feedback to her students, Rachel did not ask her students higher-order thinking questions in the observed lessons. Rather than using questions to help a student discover a concept, she typically provided the information to the student in her feedback during the observed lessons.

In contrast, Rachel’s description and actual use were similar for the LTBTS of chunking & chaining and teaching deliberate practice strategies. As a tool to help students learn a song, Rachel used a handout with five steps taken from her master’s degree voice teacher and modified for use with her students (Appendix H). The structure of the five steps separated the components of a song by text, translation, interpretation, rhythm, and pitch before asking the student to combine components. As a teaching tool, she described giving this handout to her students from the very beginning and using it as a way to help students learn how to practice a song in smaller chunks. Additionally, Rachel discussed how what she did in the lesson was based on this prescribed approach to learning a song. Since the observed lessons were early in the semester,

Rachel focused primarily on the text, rhythm, and pitch with each student. She explained the rationale for beginning with the text to a student in the following way:

The mouth needs time to learn a language, which is why I have you do it. You know, there's consonant clusters. There's order of consonants and vowels that we sometimes don't have in English so that can get kind of, you know, they'll stumble with it. And if you learn how to speak it, then the mouth has learned the fluidity of it. So then when you go to sing it, then you don't have as much trouble stumbling over the words. (Student 2 Lesson, February 6, 2018)

In terms of her familiarity with LTBTs terminology, Rachel needed an explanation for the zone of proximal development, priming, and metacognition before being able to discuss her experiences and uses with these strategies. Following a description of priming, Rachel considered an example of priming from an observed lesson to be when she had used a melismatic vocalise with a variety of emotions as a strategy to help a student prepare for a melismatic passage in a song. Additionally, she discussed how having a student work on memorizing the text as a poem prior to learning the melody allowed her to help students with specific diction issues in anticipation of singing the text. In a similar way, Rachel described her desire to assign a balance of challenging and accessible repertoire to her students as perhaps an application of the zone of proximal development. Even though there were no observed examples in her teaching, Rachel suggested she used metacognition by guiding students to think about the emotions they are trying to express in a performance or what they are thinking about to achieve specific physical sensations associated with healthy singing.

Having a student do a full performance without interruption and collaboratively setting goals were also not explicitly observed in the lessons taught by Rachel. When asked about using an uninterrupted performance in a lesson, she said,

There's two scenarios where I will use that. Sometimes if I want to check on how they have worked themselves, I'll let them sing through with no interruption just to see the progress that they've made and to hear where they have issues. So, I use that at the

beginning, sometimes not all of the time. Depends on how well the student works on their own, I think is the main factor there. But always at the end of learning the piece when they're getting ready to perform it. I want them to be able to sing through it without interruption to see what issues are still there and how they deal with them. So, you know, I don't support the idea of never having sung it all the way through before going out into a performance. (Post-Observation Interview, February 12, 2018)

Similarly, Rachel described developing goals with students at the beginning of the semester after reviewing the previous semester's jury sheets; sometimes she would have the students write them down, while other times she would not. The fact that neither of these strategies were observed being used may have been a result of the timing of the site visit.

Modeling—the final LT BTS discussed with Rachel—presented an interesting incongruity between what was stated and what was observed. In the post-observation interview, Rachel was quick to respond that she tried not to use modeling much with her students. She expounded on her reasoning by saying,

I want the student to be able to discover and do it on their own. And then if they are absolutely not getting the concept then I will sing for them. But I find that a lot of times when I do sing, they try to mimic what I'm doing. And, you know, the age difference a lot of times that's not appropriate. But you know, sometimes... they can't understand the concept until they hear it themselves. (Post-Observation Interview, February 12, 2018)

During the lessons observed for the site visit, modeling was the second most frequently observed teaching strategy used by Rachel behind feedback. She used modeling with each student to help students perform vocalises, clarify a desired tone quality, and correct notes and rhythms. Perhaps it was the perceived need of her students to have an aural example that overtook her desire to allow the students to find it on their own.

To further examine the incongruities discovered during the site visit, Rachel was asked how the observed lessons would compare to other lessons she taught. She described the observed lessons as typical, particularly since the students were first learning the songs. If the students had come better prepared to the lessons, Rachel suggested she might

have used a different approach or... would have attacked a different set of faults or issues.... Because it's the beginning of the semester and they're still learning, that is very typical. I tend to do a lot more talking and a little less singing. And then towards the end of the semester they do more singing and I do more of refining with them. (Post-Observation Interview, February 12, 2018)

Since time did not allow additional observations at a later moment in the learning process, Rachel indicated the incongruities between her observed and described uses of LT BTS would perhaps not exist in lessons observed later in the semester. As such, Rachel's positive questionnaire responses seemed to be a result of her instinctual understanding of the teaching process developed primarily through observing other individuals teach and her own personal experiences as a student rather than any formal training.

Emerging Themes

A comparison of the three participants' lived experiences with using LT BTS for teaching singing was conducted using the qualitative analysis software, MAXQDA, to code themes and identify supporting quotes within the collected data. Based on the participant interviews, observed lessons, and collected teaching materials, five themes were found to represent the overall experience of these voice teachers. The themes of *Observed Use of LT BTS* and *Familiarity with LT BTS Terminology* both examined how the participants interacted with and described LT BTS. The theme *Variety of Vocal Pedagogy Training* highlighted the differences in each participants preparation for the profession of classical voice teaching, while *Differences in Defining Vocal Pedagogy* acknowledged a potential inconsistency in how the term is used. Finally, the theme of *A Desire to Be a Better Teacher* provided additional insight into why each participant was found to have a favorable perception towards the use of LT BTS for teaching singing.

Observed Use of LT BTS

As represented in Table 5.1, nine of the 10 LT BTS were observed being used by at least one of the participants during the recorded lessons. Only collaborative goal setting was not observed. In each of the lessons, the participants used multiple LT BTS, whether they were conscious of the use or not. While feedback, modeling, and chunking & chaining were knowingly used as a teaching strategy in the lessons of all three participants, priming was not observed being used deliberately. Rachel described her assignment of a triplet vocalise as a warm-up for a student whose song also contained a similar triplet pattern as “just a coincidence,” rather than intentional on this occasion (Post-Observation Interview, February 12, 2018). Higher-order thinking questions were used frequently by Sarah and Elizabeth for the purpose of helping students construct their own understanding. Elizabeth talked about how her use of questioning developed over time and resulted from “noticing that if I tell a student something five times in a row, why are they not still doing it and starting to think, ‘well, they have to be more engaged in the discovery of that’” (Post-Observation Interview, February 1, 2018). By contrast, Rachel’s observed use of higher-order thinking questions was limited to the character study assignment even though she indicated this was an important aspect of her teaching. Metacognition was also observed in Sarah and Elizabeth’s teaching by asking students to evaluate their performance and how their thinking during the performance could be modified. Zone of proximal development, an uninterrupted full performance, and teaching deliberate practice strategies were each observed being used by only one participant—Sarah, Elizabeth, and Rachel, respectively. These findings suggested the three participants used LT BTS but were not always aware of the use of the strategies.

Table 5.1

Observed Use of LT BTS by Participant

	Sarah	Elizabeth	Rachel
Feedback	Yes	Yes	Yes
Modeling	Yes	Yes	Yes
Chunking & Chaining	Yes	Yes	Yes
Priming	Yes, but not deliberately used	Yes, but not deliberately used	Yes, but not deliberately used
Higher-Order Thinking Questions	Yes	Yes	Not in lessons, but in character study assignment
Metacognition	Yes	Yes	No
Zone of Proximal Development	Yes	No	No
Uninterrupted Full Performance	No	Yes	No
Deliberate Practice Strategies	No	No	Yes
Collaborative Goal Setting	No	No	No

Familiarity with LT BTS Terminology

In the post-observation interviews, a second and related theme surfaced addressing the participants' *Familiarity with LT BTS Terminology*. When asked to define LT BTS or the learning theories of behaviorism, cognitivism, and constructivism, none of the participants could offer an informed definition. Rather, each participant indicated they had not received any formal training that would have caused them to know how to define those terms. During the discussions about specific strategies, the three participants recognized five of the LT BTS—feedback, modeling, an uninterrupted full performance, deliberate practice strategies, and collaborative goal setting—and were able to discuss how they had experienced or deliberately taught using those strategies. In

response to being asked about chunking & chaining, Rachel prefaced her remarks by saying, “I’m assuming that’s breaking up into just little sections and then chaining them together” (Post-Observation Interview, February 12, 2018). Additionally, Rachel was aware of the difference between higher-order and lower-order thinking questions, which she later suggested was a result of her husband being a string music educator at a local high school. By contrast, Sarah and Elizabeth required a definition prior to being able to discuss their experiences with higher-order thinking. For all of the participants, a pattern of requiring an explanation from the researcher occurred for the remaining three LTBTs: priming, metacognition, and zone of proximal development.

Table 5.2

Familiarity with LTBTs Terminology

	Sarah	Elizabeth	Rachel
Feedback	Yes	Yes	Yes
Modeling	Yes	Yes	Yes
Uninterrupted Full Performance	Yes	Yes	Yes
Deliberate Practice Strategies	Yes	Yes	Yes
Collaborative Goal Setting	Yes	Yes	Yes
Chunking & Chaining	Yes	Yes	Guessed based on word meanings
Higher-Order Thinking Questions	No	No	Yes
Priming	No	No	No
Metacognition	No	No	No
Zone of Proximal Development	No	No	No

Variety of Vocal Pedagogy Training

As a means of better understanding how each participant may have potentially been exposed to LTBTs, an analysis of the voice teaching preparation received by participants produced the theme *Variety of Vocal Pedagogy Training*. Even though Sarah and Elizabeth held a DMA in vocal performance, the amount of formal training in vocal pedagogy received during those degrees was quite different. Elizabeth was not required as part of her DMA to take any additional pedagogy courses beyond the class she had taken in her master's degree, whereas Sarah took a series of supplemental courses in vocal pedagogy. Those courses provided an extensive understanding of voice science, an understanding of historical perspectives of vocal pedagogy, and even a course through the Speech and Language Pathology program. This contrast between these participants' experience was highlighted via a comment made by Elizabeth. When asked if she believed a vocal pedagogy degree was an accurate route for preparing individuals to teach singing, Elizabeth stated,

No. No, I really don't. I think often people who pursue that, or at least look into, do it because they want to be a good teacher. But my experience, which is not firsthand experience with those kinds of degrees, is that there's such a very strong emphasis on the science and not much emphasis on the practical use of it towards the goal of helping some individual person sing better and be a better musician.... I think I still feel like the best route to becoming a really fine teacher is to pursue degrees in performance where you're learning it yourself and absolutely take advantage of learning the voice science and the pedagogy classes which vary greatly, I'm sure, from school to school. But the degree in performance is I think still the best preparation for teaching. (Post-Observation Interview, February 1, 2018)

Rachel—whose highest held degree was a Master of Music in vocal performance—also had a limited amount of formal training for teaching singing. She attributed her voice teaching preparation primarily to her undergraduate vocal pedagogy course and to what occurred in her master's level voice lessons. It is also important to note that none of the participants took a course in learning theory or indicated having a course that discussed how brain processing

information may impact the learning process; rather, the emphasis for the vocal pedagogy training that each of the participants did receive tended to be on the anatomy, physiology, and resonance of the voice.

Differences in Defining Vocal Pedagogy

Another recurring theme was found when asking participants to define *vocal pedagogy*. During Rachel's pre-observation interview, she referred to how her master's voice teacher's approach tended to emphasize physical sensations, rather than dealing "a whole lot with the pedagogy side of things" (January 8, 2018). When asked to clarify what she meant by the word pedagogy in that context, she indicated it was "more of the scientific approach." As a result of this conversation, a line of questioning was added to the post-observation protocol to further understand how the participants defined *pedagogy*, *vocal pedagogy*, and *voice science*. Table 5.3 presents the responses of each participant to these questions. All participants described pedagogy as relating to how something is taught or the study of how to teach. Similarly, all three participants defined voice science as concerned with the technical understanding of how the voice works, in terms of both the physical and acoustical attributes. A consistent definition for vocal pedagogy between the three participants was not clear. As can be seen in Table 5.3, each participant's definition for vocal pedagogy offered a different perspective on how to explain the term and suggested a potential inconsistent use of the term within the field of classical voice teaching. Elizabeth identified these differences when she said, "And you know something else I've noticed is that there is music education and there is vocal pedagogy and there's voice science and they're all different and they maybe shouldn't be" (Post-Observation Interview, February 1, 2018).

Table 5.3

Participant Definitions of Pedagogy, Vocal Pedagogy & Voice Science

	Sarah (Post-Observation Interview, January 23, 2018)	Elizabeth (Post-Observation Interview, February 1, 2018)	Rachel (Post-Observation Interview, February 12, 2018)
Pedagogy	I think that pedagogy is like the science or the teaching itself... learning how to teach and the science and the art, I guess, of teaching itself and not just the subject matter that you're teaching.	Teaching in a practical sense, teaching as... You know, that helps the person that is learning be able to do something and to do it better.	Pedagogy is the study of teaching or the art of teaching in general.... The way a person teaches and being able to break down whatever you're teaching in a way that can be understood and, you know, studying different ways of breaking that down and different ways of explaining it.
Vocal Pedagogy	I think there is obviously a pretty heavy anatomy and physiology component that I think is... kind of the basis.	Vocal pedagogy, in my mind, starts with the basic assumption that everybody can sing. So, we're not teaching somebody a skill that they do not have. We want to help them make the most of the voice that they have and by knowing how to use it most effectively in order to give artistic expression to whatever they are doing.	Vocal pedagogy I feel is very similar in that there are different approaches to learning the same concept. And so, learning vocal pedagogy you learn the various sides of being able to get a student to do what you're trying to get to. For instance, there's the side of the artistic and imagery and sensational-ism and then there's the approach from the science side of knowing what's happening and trying to get the student to understand that and to make adjustments in that way too.
Voice Science	Voice science seems like it's more in-depth into the intricacies of anatomical and physiological things that happen. And maybe that [sic] the specific acoustical things you can see on a graph and figuring out what you know, what muscle it is that causes this little place in this spectrograph to do this or whatever and how that translates to what we do as teachers.	Voice science is the understanding of the physiology of how the voice works, the mechanics of how it is producing sound and what changes in the different circumstances.	Voice science would be the scientific side of that. Studying the anatomy... Studying the acoustics and the physics of singing. Bringing in the different ailments that affect the voice and how to accommodate or adjust in that regard.

A Desire to Be a Better Teacher

Although none of the participants had any previous formal exposure to LT BTS, each of the participants had a favorable response to them on the questionnaire and during the interviews. The favorable response was also corroborated through the participants' body language and tone of voice when the researcher explained the purpose of the study at the end of the post-observation. It was in this part of the conversation that Sarah indicated her intention to research LT BTS in order to better understand how she could use them in her teaching. Elizabeth expressed appreciation for the opportunity to think through how she teaches as a result of participating in this study. This seemed to align with the following statement she made earlier in the interview:

I just want to be the best teacher I can be and... I decided consciously that I would rather figure out how to do it better than to spend my energy defending what I was already doing. So, it's been a conscious thought for a number of years and it keeps evolving.
(Post-Observation Interview, February 1, 2018)

Even though Rachel did not specifically address how an awareness of LT BTS may impact her teaching, she talked about the steps she was making in order to start a doctoral program in the near future and how that additional degree could equip her with additional teaching skills. When viewed collectively, these three responses suggested a theme of *A Desire to Be a Better Teacher*, which may offer an additional insight into why the participants had a strong positive perception toward using LT BTS for teaching singing.

Chapter Summary

In order to more fully understand how teachers of singing have experienced and use LT BTS for teaching singing, three participants—Sarah, Elizabeth, and Rachel—were examined using a phenomenological case study approach. Five themes emerged through analysis of the

participants' lived experiences: *Observed Uses of LT BTS*, *Familiarity with LT BTS Terminology*, *Variety of Vocal Pedagogy Training*, *Differences in Defining Vocal Pedagogy*, and *A Desire to Be a Better Teacher*. The themes suggested that, although each participant used many of the LT BTS, they were not necessarily aware of their use of the strategies. This was perhaps linked to the participants' lack of familiarity with the terminology of learning theories and four of the LT BTS. An examination of the participants' vocal pedagogy training offered three different paths for degree requirements and content focus. A similar difference in focus was found when the participants were asked to provide a definition for *vocal pedagogy*. Even though each participant's experiences were distinct, all three participants exhibited a desire to be a better teacher, which may have also been a factor in why the participants viewed the use of LT BTS positively.

CHAPTER SIX

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Overview of the Study

Using an explanatory sequential mixed methods design, the purpose of this study was to explore the uses of LTBTS by collegiate teachers of singing. The quantitative phase focused on understanding the collective perception of university-level choral conductors and voice teachers towards the use of LTBTS when teaching singing by distributing a nationwide questionnaire through the CMS email distribution service. Results suggested all participants (N = 350) had a favorable perception, reported using the teaching strategies “most of the time,” and considered the LTBTS to be important tools for teaching singing. In order to further explain these results, three phenomenological case studies were conducted using selected questionnaire respondents. Emerging themes from the qualitative phase included: *Observed Use of LTBTS*, *Familiarity with LTBTS Terminology*, *Variety of Vocal Pedagogy Training*, *Differences in Defining Vocal Pedagogy*, and *A Desire to Be a Better Teacher*. This final chapter presents a discussion of how the results answer the research questions, the implications of the results for voice teaching, and recommendations for further research.

Conclusions: Quantitative Research Questions

As stated in chapter three, the following questions guided the quantitative phase of the study.

1. *What are the perceptions of collegiate teachers of singing towards the use of learning-theory-based teaching strategies for teaching singing?*

2. *To what extent do collegiate teachers of singing perceive learning-theory-based teaching strategies to be important for teaching singing?*
3. *How frequently do teachers of singing believe they use learning-theory-based teaching strategies for teaching singing?*
4. *Which teachers of singing, if any, are more likely to have positive or negative perceptions regarding the appropriateness of using learning-theory-based teaching strategies in the teaching of singing?*

Results from the questionnaire indicated collegiate teachers of singing in the United States had an overwhelmingly positive attitude towards using LTBTs for teaching singing. Since no scores were in an unfavorable category, the positive perception was consistent across all participants. Only 2.6% ($n = 9$) of the respondents had a score in the “somewhat favorable” category, while the remaining responses were found to be in the “favorable” and “highly favorable” attitude ranges. While no previous research had investigated this phenomenon, the positive response would seem to be aligned with effective characteristics identified in applied music lessons (Duke & Simmons, 2006; Gaunt, 2008; Gholson, 1998; Parkes & Wexler, 2012). Although the mean degree of importance score was found to be lower than the mean attitudinal score, the data indicated that collegiate teachers of singing believe the use of LTBTs for teaching singing was important. As perception of importance is likely to be tied to a respondent’s attitude, the correlation between participants’ attitude and importance scores was an expected outcome.

The frequency-of-use responses also supported the participants’ positive perceptions and indicated singing teachers use each of the LTBTs most of the time. The teaching strategies reported as most frequently used—providing high quality feedback, teaching deliberate practice

strategies, breaking repertoire into small chunks, and collaboratively setting goals—would seem to be logical as these are strategies experienced by the researcher as a student and practices commonly used in the apprenticeship model of applied music lessons. The lowest frequency teaching strategy was having a student perform the entire song without interruption even if errors occur. Participants may have indicated doing this with less frequency because of not wanting to reinforce errors in a student's performance. A similar respondent thought process may have influenced responses to selecting repertoire just beyond a student's ability level as participants may have prioritized developing independent musicianship over the use of developmentally challenging repertoire.

In a general sense, meaningful differences in perceptions between subgroups of respondents were not found, perhaps as a result of the overall highly favorable response of participants towards the use of LTBTs. Examination of participant attitudes identified weak relationships with the participants' identified primary teaching role, secondary teaching role, levels of teaching experience, and highest held degree. Inferential statistics did not present further information for most of these correlations; only the relationship between highest held degree and attitude offered insight into potential differences between participants. Although a weak relationship suggested that teachers with a bachelor's degree as their highest held degree had a slightly less favorable attitude, this finding was likely limited by the small number of respondents ($n = 5$). This result was not related to lack of teaching experience since the average number of years of teaching experience for these participants was 28 years. The finding may perhaps be the result of those participants not having an opportunity to take graduate-level vocal pedagogy courses or becoming a voice teacher through an experiential rather than academic route.

By surveying collegiate teachers of singing, the broad picture of the phenomenon suggested that singing teachers in the United States view LT BTS favorably and as important enough to use with at least a moderate frequency. This picture was encouraging to the researcher and suggested that more information about how students learn may have been shared between the disciplines of music education and vocal performance than previously anticipated. As these results could not verify possible reasons for the positive perceptions of teachers of singing, the quantitative results lacked the rich detail necessary for more fully understanding the phenomenon and offering valuable implications for the field of voice teaching. To address this deficiency, the qualitative research questions and subsequent mixed method research question offered helpful insights in being able to accomplish these goals.

Conclusions: Qualitative Research Questions

The following questions were used to direct the qualitative phase of the study.

1. *How do collegiate teachers of singing use learning-theory-based teaching strategies to teach singing?*
2. *What influences the perceptions of collegiate teachers of singing towards the use of learning-theory-based teaching strategies for teaching singing?*
3. *How do collegiate teachers of singing become familiar with learning-theory-based teaching strategies?*

Three phenomenological case studies were conducted to investigate these questions. The observations, interviews, and collected materials suggested that all three of the voice teachers used the LT BTS in their teaching. The observations provided empirical evidence that modeling,

chunking & chaining, and feedback were used as the primary tools for delivering instruction. Modeling—a demonstration given by the teacher—was used as a tool for providing students with an aural example. Rachel and Sarah both expressed hesitation towards using this too frequently as the student may try to match the teacher’s tone quality, which could be developmentally inappropriate or not the same Fach. Chunking & chaining was the process used for working through the repertoire in the lessons. Sometimes the teacher would have a student perform a whole song before working on specific sections; other times the teacher would have the student start with a small section identified as a problem area before putting it back in the context of the song. During the interviews, priming was described as a tool used to help prepare students for this technical work, even though the observed uses of priming appeared to be more happenstance than deliberate. Feedback was used by each participant as a means to encourage positive attributes and redirect undesirable behaviors. Positive feedback was consistent across all three participants with each teacher using primarily general affirmative phrases such as “good job” or “yeah.” Redirecting feedback took two forms: Rachel tended to tell her students what she wanted them to do, while Elizabeth and Sarah often asked higher-order thinking questions or asked a student to engage in metacognition as a tool to help the student discover how to address a specific technical issue. It was not clear why this difference existed; however, the researcher suspected it was likely the result of what the teacher had experienced as a student.

The remaining LTBTs—ZPD, an uninterrupted full performance, deliberate practice strategies, and collaborative goal setting—were used much less consistently across the three teachers. While each participant could discuss how they used ZPD, Sarah was the only teacher observed using ZPD, which she used to help a student who was learning a musical theatre song that required him to sing in an unfamiliar style. In a similar way, Elizabeth was the only

participant observed using an uninterrupted full performance. She used this LT BTS with several students as a tool to help them synthesize what they had been working on or as a means to assess what still needed to be worked on in preparation for a public performance. Although not observed in her teaching, Rachel identified similar objectives when asked to discuss how she had experienced or taught using an uninterrupted full performance. Rachel was the only teacher observed teaching deliberate practice strategies. This was primarily through her use of a specified procedure for learning a song. In addition to a handout detailing this process, Rachel structured what she did during the lesson around the student's progress through the learning process. Although this was not observed in the other two teachers, both discussed helping students learn how to practice, particularly when the student first started taking voice lessons. Even though collaborative goal setting was not observed being used by any of the three participants, goal setting was described by participants as both a motivational tool and guide for developing lesson objectives used primarily at the beginning of a semester.

In seeking to answer what influences singing teachers' perceptions towards using LT BTS, the theme *Variety of Vocal Pedagogy Training* presented several different experiences as possible influences. Sarah's primary influences were the teaching style of her master's voice teacher and the voice science emphasis of her doctoral vocal pedagogy courses. Elizabeth's influences were her experiences of learning to teach by doing it and what she had observed at the Naked Voice Institute, while Rachel was influenced principally by the focus on physical sensations utilized by her master's voice teacher. With each of the participants having a different preparation pathway, it would seem reasonable that differences in perceptions and uses would occur. While differences in uses and teaching approaches did exist, the overall response to using

LTBTS when asked to talk about the strategies was quite positive for each participant, which suggested the variety in training experiences had not negatively impacted perceptions.

Another insight into the influences on the participants' perceptions was gleaned from the theme *A Desire to Be a Better Teacher*. Throughout the interviews, each participant demonstrated a desire to continue to improve her skill set as a teacher. For Elizabeth, this desire had meant setting aside ego in order to evaluate her own practices for the sake of doing what will be most effective for students; this was also reflected in her attendance of the Naked Voice Institute the previous summer. Sarah demonstrated an intellectual curiosity when she indicated her intention to research the learning theories. Her belief in her teacher's statement about significant growth occurring when a person teaches was another representation of her openness towards learning new approaches. Rachel, by her aspiration to start doctoral studies in the future, signified her intention to further expand her teaching toolkit beyond what she already possessed. As a result, this desire to be a better teacher likely influenced each of these teachers to view the unfamiliar LTBTS as helpful and beneficial teaching tools rather than as an impediment to their teaching.

A simple answer to the third qualitative research question was the participants became familiar with most of the LTBTS through their experiences as a student and training to be a voice teacher. This answer was supported by the participants' observed use of the LTBTS and ability to describe previous experiences with the strategies. This simple answer, however, did not address the lack of familiarity with LTBTS terminology directly related to the theories of behaviorism, cognitivism, and constructivism. During the post-observation interviews, each of the participants required an explanation of terminology prior to being able to describe how they had used or experienced four of the teaching strategies. In addition, none of the participants were

able to accurately define the three learning theories or the phrase *learning-theory-based-teaching strategies*. As a result, the participants started to become familiar with some of the LT BTS terminology—typically taught in teacher education programs—during the course of the study. Perhaps a more complete answer to the third research question would be the teachers became familiar with how to use the strategies through being a student and training to be a voice teacher, and they learned specific descriptive terminology for the strategies through participation in this study.

It is important to acknowledge two limitations of these qualitative findings. First, although the quantitative results were found to be representative of the target population of collegiate teachers of singing in the United States, the themes emerging from the qualitative phase were representative of the lived experiences of only those three individuals. In an ideal situation, additional case studies would have been conducted to offer a larger set of experiences to further explain the quantitative results. It could be argued that a second limitation of the qualitative results was the use of only female participants. A substantial effort was made to use at least one male participant by contacting multiple potential participants. Time, accessibility, and life situations kept each of those teachers from agreeing to participate. Since gender was not considered to be an independent variable for the study, the use of only female case studies was not perceived to be a practical limitation. In recognition of the opposing position, a recommendation to conduct qualitative inquiry with male participants is made in the recommendations for further research section of this chapter.

Conclusions: Mixed Methods Research Question

In addition to integrating the two data sets between study phases, the following question was used to connect the data at the conclusion of the study.

In what ways do the qualitative data describing the uses of learning-theory-based teaching strategies by collegiate teachers of singing help to explain the quantitative results about perceptions reported on the questionnaire?

While each of the previously described research phases offered a distinct perspective, the mixed methods design of this study was selected to combine both perspectives as a means to create a more complete and rich description of the phenomenon. In order to accomplish this objective, each qualitative theme was compared with the quantitative results. This approach reflects the researcher's prioritization of both sets of data, rather than a single data set.

As indicated by the summary of questionnaire responses, respondents reported using all 10 of the LT BTS with a frequency of at least "most of the time." A comparison with the case study participants' *Observed Use of LT BTS* offered a mixed confirmation of the quantitative results. Table 6.1 presents a side-by-side comparison of the rankings of frequency of use. For the questionnaire data, LT BTS were ordered from highest to lowest based on the percentage of "most of the time" and "always" responses. The qualitative listing was ordered based on the number of participants observed using the LT BTS and the observed frequency. The data was considered confirmed if the rankings were within two placements of each other to allow for a small degree of difference between the rankings; a difference of three or more was not considered a confirmation.

Table 6.1

<u>Questionnaire Frequency of Use vs. Qualitative Observed Use of LTBTS</u>			
	Questionnaire Ranking	Observed Use Ranking	Confirmed?
Feedback	1	1	Yes
Modeling	6	2	No
Chunking & Chaining	3	3	Yes
Higher-Order Thinking Questions	8	4	No
Priming	7	5	Yes
Metacognition	5	6	Yes
Zone of Proximal Development	9	7	Yes
Uninterrupted Full Performance	10	8	Yes
Deliberate Practice Strategies	2	9	No
Collaborative Goal Setting	4	10	No

According to Table 6.1, the case study participants' use of LTBTS was similar to the questionnaire responses for six of the LTBTS. As previously discussed, the frequency of use for feedback and chunking & chaining was expected as these are teaching characteristics typically associated with the learning process in the voice studio (Duke & Simmons, 2006; Gaunt, 2008; Gholson, 1998; Parkes & Wexler, 2012). Priming and metacognition were found to be similarly ordered towards the middle of the list for both rankings, while the zone of proximal development and an uninterrupted full performance received low rankings. These confirming results may suggest these middle and low frequency LTBTS are more time-consuming or require more intention and preparation for use on the part of the instructor.

The four remaining LTBTS found in Table 6.1 may have been unconfirmed for several reasons. As indicated in the post-observation interviews, Elizabeth, Rachel, and Sarah considered

teaching deliberate practice strategies and collaboratively setting goals to be a valuable teaching strategy used primarily at the beginning of the school year or semester. Since the observations were not conducted at that time, the teachers were not observed using these strategies with as a frequency as high as indicated by the questionnaire participants. Although modeling was used extensively during the observed lessons, two of the qualitative participants recognized potential issues with using modeling as a primary teaching tool. This thought process may have impacted the questionnaire participants' responses, causing the stated frequency of use to be lower than the observed use. For higher-order thinking questions, the difference in rankings may be attributed to a lack of familiarity with the terminology or awareness of the LTBTs being used. This was the case for Elizabeth and Sarah, both of whom required an explanation of the term during the interview but used the strategy extensively in their teaching.

Although the frequency of use for four of the LTBTs was not confirmed by the observed use, it should be noted that all but one of the LTBTs—collaborative goal setting—were observed being used by the case study participants. Additionally, the participants were able to describe uses for each of the strategies as part of the post-observation interview. This suggests that, while the participants may not always be aware of the use or be able to identify a label for the teaching strategy, the qualitative participants viewed these teaching strategies favorably and considered LTBTs important enough to use in their teaching.

Just as differences in familiarity with terminology helped to explain possible variations in the frequency of use, the theme *Familiarity with LTBT Terminology* was used as a lens for examining responses to the open-ended question on the questionnaire. Although the case study participants were familiar with several of the LTBTs, an explanation was needed for four: zone of proximal development, priming, metacognition, and higher-order thinking questions. In

coding the open-ended responses, each of the 10 LT BTS were restated by a minimum of three participants. Similar to the case study participants' familiarity, higher-order thinking questions was tied for the second-highest frequency of coded responses ($n = 29$), suggesting questionnaire respondents were also not familiar with this teaching strategy term. Unlike priming—which had 11 coded responses and offered an explanation of the term within the question prompt—it is perhaps important to notice that the term was used in the question prompt without any context clues to aid respondents in understanding its meaning. Although the term was not used in the question prompt, 11 respondents wrote a description that was coded as metacognition. Zone of proximal development was only coded for three respondents and would seem to align with the previous discussion of a lower observed frequency of use for this LT BTS.

The *Variety of Vocal Pedagogy Training* was also evident in the open-ended question responses. A quick glance through the coded open-ended response themes (see Table 4.11) represented different historical approaches to teaching singing. Coded themes—other than restatements of LT BTS—included helping students increase body and kinesthetic awareness, a focus on the artistic and emotional expression, providing students with a functional knowledge of the anatomy and physiology of the voice, the importance of being aware of how individual students learn, and the expressive qualities inherent to knowledge found in and about the text. Just as this list would suggest different concentrations of content, the vocal pedagogy training experienced by the three qualitative participants represented diverse foci from voice science to the physical sensations associated with healthy, expressive singing to experiential, on-the-job training. The diversity in additional teaching strategies identified by quantitative participants was likely indicative of the inconsistency inherent to the variety of pathways available for becoming a collegiate voice teacher.

In a similar way, the theme *Differences in Defining Vocal Pedagogy* presented an explanation for several open-ended question responses. As identified in the post-observation interviews, the case study participants were consistent across their definitions for pedagogy and voice science but offered different perspectives on vocal pedagogy. Sarah focused on anatomy and physiology. Elizabeth's definition focused on helping students make the most of their voice technically and artistically, while Rachel viewed it as two-pronged: a kinesthetic awareness approach and a scientific approach. It is perhaps these differences in defining vocal pedagogy that caused 76 participants (41% of coded responses) to write answers that were coded as a voice science theme. A perceived inconsistency was expressed when a participant stated, "I don't necessarily see how this related to Vocal Pedagogy... it's more teaching Pedagogy" (Participant ID: RD 43). The identification of the questionnaire as being a vocal pedagogy survey in the CMS distributed email may have set up an unintended expectation of respondents for the questions to address voice science concepts rather than pedagogical strategies. When viewed collaboratively with the previous theme, the data suggested that perhaps within the various pathways to be a voice teacher the content of *what* should be taught when teaching singing had been communicated more often than research-based approaches for *how* to teach the content.

Despite the differences in training and familiarity with LT BTS terminology, the case study participants demonstrated *A Desire to Be a Better Teacher*, which may offer the most insight into the respondents' positive perception towards the use of LT BTS for teaching singing. As each strategy was presented in a way that was useful for teaching, respondents—just like the qualitative participants—likely considered the strategies as a helpful teaching tool, which may have prompted the responses to be favorable. Even if the participants were not aware of their use of the strategy prior to answering the survey questions, the inherent desire of a voice teacher to

help students improve their performances would likely positively influence the attitude score. Elizabeth's recognition that she currently used some strategies less frequently than she had in the past also helped to explain why the mean degree of importance score was lower than the attitudinal score. This seemed to align with the understanding that all of the LTBTs would not be used at the same time; rather, the strategies would be viewed as important in varying degrees depending on the teaching situation and the growth of the teacher using the teaching strategies.

As a result of the side-by-side examination of the quantitative and qualitative data sets, a broad picture of the phenomenon emerged. Collegiate teachers of singing in the United States generally view LTBTs favorably and important for teaching singing; this is likely the result of a desire to be an effective teacher. The LTBTs are used by singing teachers frequently but not necessarily intentionally or knowingly. As a result of the variety of paths for becoming a voice teacher, collegiate singing teachers may not be able to identify LTBTs based on its terminology. This may also be confounded by differences in how vocal pedagogy is defined across the discipline of voice teaching.

Implications for Voice Teaching

In view of the description of the phenomenon created through this mixed methods study, there are several implications that can be made for voice teaching. These suggestions are primarily related to the process of preparing voice educators, although they would also likely impact the corresponding literature discussing voice teaching. The first implication is that there is a need for further codification and dissemination of teaching strategy terminology as it applies to teaching singing. Much of this work has already been done in the fields of teacher education and music teacher education; the terminology used for this study was borrowed from those

settings. Importantly, however, the literature review did not offer any previous connections of LT BTS terminology to the context of teaching singing. By labeling and identifying specific teaching strategies, the information may become more accessible for graduate programs designed to prepare voice educators. Based on the positive perceptions reported by the participants in this study, the researcher believes the terminology could be received well and allow for improved communication between colleagues and disciplines.

In addition to codifying LT BTS for teaching singing, this study also identified a need to clarify the distinctions between vocal pedagogy and voice science. In an article in the *NATS Journal of Singing*, Holding (2007) acknowledged “voice science has influenced, and to some extent, even defined voice pedagogy over at least the past fifty years” (p. 141). While knowledge of the anatomy, physiology, and acoustical principles of the voice is important, vocal pedagogy is not limited to those concepts often associated with voice science. Rather, a functional definition of vocal pedagogy should make use of the principles of learning—based on the emerging knowledge from cognitive science and found in educational learning theory research—and offer applications of those principles for learning how to sing. Recognizing the important relationship of cognitive science to voice teaching, Holding further stated, “the manner in which a teacher disseminates knowledge to one’s student is even more significant than previously imagined” (p. 148). In this way, the distinction between vocal pedagogy and voice science may benefit from the use of a sequential learning process that may be combined with the traditional diagnostic approach to teaching singing.

The final logical implication would be the development of a more consistent pathway for preparing collegiate teachers of singing. Although Elizabeth believed the graduate vocal performance degree was the best preparation for teaching, not everyone who receives a

performance degree has the intellectual curiosity and self-motivation to pursue being a successful teacher. In the field of music education, it is no longer accepted that strong music performance skills equate to being an effective music educator. Why, then, would strong vocal performance skills equate to being an effective voice educator? Instead, a graduate voice education curriculum—which may be a distinct degree or offered as a related content area—may include courses in anatomy and physiology of the voice, vocal health and Vocology, historical perspectives on vocal pedagogy, applied teaching practicum, and vocal pedagogy as the study of the art and science of teaching singing. As part of this curriculum, the degree program could utilize colleagues and resources in music education and speech-language pathology for assistance in translating what is known about how the brain processes information to learning to sing. Additionally, it would be beneficial to create a research-based resource applying LTBTs in teaching singing as a supplement to the rich landscape of voice science literature that could be used in graduate-level vocal pedagogy courses. Through the development of graduate voice educator degree programs, the field of voice teaching may further integrate theory and practice and ultimately enhance the profession.

Recommendations for Future Research

Based on the study results and conclusions, the following questions for further research emerged.

1. What are the lived experiences of male collegiate voice teachers with using LTBTs for teaching singing? How do those experiences compare to the experiences of female collegiate voice teachers?

2. What are the lived experiences of collegiate voice teachers whose qualifications are rooted in a professional performing career (rather than a terminal degree in performance) with using LTBTS? How do those experiences compare to the experiences of collegiate voice teachers for whom teaching was their initial career track?
3. What are the lived experiences of collegiate choir directors with using LTBTS for teaching singing? How do those experiences compare to the experiences of collegiate voice teachers?
4. How do collegiate teachers of singing prepare for and become collegiate teachers of singing? How are graduate students prepared for future teaching in graduate vocal performance and vocal pedagogy degrees? What changes could be made to help future voice educators be better prepared for a teaching career? What are the perceptions of collegiate vocal pedagogy instructors towards the inclusion of a learning theory component in a vocal pedagogy course?
5. What are the perceptions of choral music educators towards the use of LTBTS in a choral rehearsal setting? How do choral music educators use LBTS in a choral rehearsal setting? How do choral music educators become familiar with LTBTS?
6. What are the perceptions of collegiate instrumental lesson teachers towards the use of LTBTS for teaching applied instrument lessons? How do collegiate instrumental lesson

teachers use LT BTS for teaching applied lessons? Do differences exist in perceptions and uses between types of instruments?

Summary

In seeking to understand how collegiate teachers of singing use LT BTS for teaching singing, this study examined both the collective perceptions of teachers in the United States and the lived experiences of three singing teachers. The collective perceptions indicated the LT BTS were used frequently and were viewed very positively by all types of singing teachers, even though the LT BTS were only considered to be moderately important. Each of the case study participants confirmed the frequency of use and positive attitude; however, the case studies suggested the participants were not always aware of the use and did not have prior exposure to LT BTS specific terminology. Both inquiry processes discovered differences in how vocal pedagogy is defined. These differences implied a clarification was needed to distinguish vocal pedagogy from voice science in the field of voice teaching.

Based on the differences in voice teacher training and an observed lack of familiarity with LT BTS knowledge, a recommendation was made to develop a graduate voice educator degree that would combine the courses traditionally taught in a vocal pedagogy program with courses that would deliver information about the application of educational learning theories and cognitive science to teaching singing. The researcher recognizes this type of program would require a significant shift in how teaching voice is viewed since the process of becoming a voice teacher has often relied on the apprenticeship model of teacher training. It is the belief of the researcher that the highly positive perceptions indicated by this study demonstrate an openness towards the sharing of information between the disciplines of music education, voice, cognitive

science, and speech-language pathology. By transitioning to view ourselves as voice educators, the profession of voice teaching may strive to improve the skills used as both teachers and performers and, ultimately, increase student learning through the use of research-based approaches for teaching singing.

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APPENDIX A

INTRODUCTORY LETTER & QUESTIONNAIRE

A research study—**Using Learning-Theory-Based Teaching Strategies for Teaching Singing: An Explanatory Sequential Study of Collegiate Teachers of Singing**—is being conducted through Ball State University involving collegiate teachers of singing in the United States. The purpose of this quantitative phase of the study is to describe the perceptions of collegiate teachers of singing towards the use of learning-theory-based teaching strategies for teaching singing. To be eligible for participation, you must be a college or university applied voice teacher or choir director in the United States and at least 18 years old. Participation in this survey is completely voluntary and you may stop at any time by exiting the browser. This questionnaire will take approximately 10-15 minutes to complete. To begin the survey, please click on the following link: <QUALTRICS GENERATED LINK>

Thank you for your consideration and assistance. If you have any questions about this survey, please feel free to contact:

Principal Investigator

Susan E. Shirel, M.A.
D.A. Candidate
Ball State University
Muncie, IN 47306
Instructor of Music
Harding University
Searcy, AR 72149
seshirel@bsu.edu

Faculty Advisor

Don P. Ester, Ph.D.
Professor of Music Education
Ball State University
Muncie, IN 47306
dester@bsu.edu

Effective Teaching Strategies for Teaching Singing

Start of Block: Introduction to Survey

Introduction

Study Title:

Using Learning-Theory-Based Teaching Strategies for Teaching Singing: An Explanatory-Sequential Study of Collegiate Teachers of Singing

Study Purposes and Rationale:

The purpose of this study is to investigate the uses of learning-theory-based teaching strategies (LTBTS) by teachers of singing in colleges and universities for teaching singing. Literature regarding the applied music lesson setting explores characteristics of effective teaching, the teacher/student relationship, the self-efficacy of applied teachers, and the development of an evaluation tool for applied lessons; however, no research has yet examined the use of teaching strategies specifically identified as learning theory based for teaching singing. Limitations of the literature lie in the unknown applications to the voice studio and the focused attention on common characteristics, rather than perceptions of teachers towards the appropriateness of using the teaching strategies. The following research is intended to identify to what extent teachers of singing are knowledgeable about learning theory based teaching practices and how teachers of singing may already be using these strategies. Through this research, the researcher hopes to expand the knowledge base in research based approaches of teaching singing and ultimately, increase student learning.

Inclusion/Exclusion Criteria:

To be eligible for participation, you must be an applied voice teacher or choral director currently teaching at a higher education institution in the United States. Participants must be over the age of 18. Collegiate teachers of singing outside of the United States are not eligible.

Participation Procedures and Duration:

You will be invited to complete an online questionnaire requesting demographic data and information regarding your perceptions towards the use of learning theory based teaching strategies for teaching singing. The survey will take approximately 10-15 minutes.

Data Confidentiality or Anonymity:

Due to the online nature of the survey, the researcher will be unaware of your identity, and therefore your responses will be anonymous. In an effort to protect the privacy of you and your school, no identifying information (other than the public or private status and state) such as

names will appear in any publication or presentation of the data.

Storage of Data:

The data will be entered into a software program and stored on the researcher's password-protected computer for one year and then deleted. Only members of the research team will have access to the data.

Risks or Discomforts:

There are no anticipated risks.

Benefits: While there are no direct benefits to participating in this survey, you may enjoy and possibly benefit from self-reflection and discussion about your teaching practices.

Voluntary Participation:

Your participation in this study is completely voluntary and you are free to withdraw your permission at anytime for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before signing this form and at any time during the study.

IRB Contact Information:

For questions about your rights as a research subject, please contact the Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070 or at irb@bsu.edu.

Researcher Contact Information:

Principal Investigator:

Susan E. Shirel, M.A.

D.A. Candidate

Ball State University

Muncie, IN 47306

Instructor of Music

Harding University

Searcy, AR 72149

seshirel@bsu.edu

Faculty Advisor: Don P. Ester, Ph.D.

Professor of Music Education

Ball State University

Muncie, IN 47306

dester@bsu.edu

Once you have answered the questions on a page, please use the arrow at the bottom of the page to continue. This survey is accessible on either a desktop or mobile platform. However, it is highly recommended that you complete it on a desktop. If taking the survey on a mobile device, some questions require you to select drop-down arrows to view answers.

Please confirm you are human.

End of Block: Introduction to Survey

Start of Block: Attitude Matrix

Please respond to the following statements in the context of collegiate voice lessons.

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
I believe asking a student higher order thinking questions is an appropriate strategy when teaching singing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe using vocalises to prime challenging patterns in the repertoire is an appropriate strategy for teaching singing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe breaking sections of repertoire into small chunks for mastery and then connecting the chunks is an appropriate teaching strategy for teaching singing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe selecting repertoire just beyond the current ability of the student while helping the student learn the skills necessary to successfully	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

perform the repertoire is an appropriate strategy to use in collegiate voice lessons.

I believe it is appropriate to have a student perform the entire song without interruption during the voice lesson, even if he makes errors.

I believe it is appropriate to provide high-quality, specific feedback throughout the lesson, including praise for successes and redirection for errors.

I believe teaching a student to be aware of what she is thinking about her singing while singing is an appropriate strategy in teaching singing.

I believe teaching deliberate practice strategies is an appropriate strategy for

☐ ☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐ ☐

☐ ☐ ☐ ☐ ☐ ☐

teaching singing.						
I believe providing high-quality models and/or demonstrations in the lesson are an appropriate strategy for teaching singing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe goal setting done collaboratively between the teacher and the student is an appropriate strategy to use in collegiate voice lessons.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Attitude Matrix

Start of Block: Frequency of Use Matrix

Please indicate how frequently you use each of the following teaching strategies when teaching singing.

	Always	Most of the time	About half the time	Sometimes	Never
Ask higher order thinking questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prime challenging patterns in the repertoire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Break sections of repertoire into small chunks for mastery and then connect the chunks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Select repertoire just beyond the current ability of the student while helping the student learn the skills necessary to successfully perform the repertoire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have a student perform the entire song without interruption during a voice lesson even if he makes errors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide high-quality, specific feedback throughout the lesson, including praise for	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

successes and redirection for errors					
Teach a student to be aware of what she is thinking about her singing while she is singing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teach deliberate practice strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide high-quality models and/or demonstrations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set goals collaboratively with a student	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Frequency of Use Matrix

Start of Block: Importance Matrix

Please indicate the level of importance you give to each of the following teaching strategies when teaching singing.

	Not at all Important	Low Importance	Slightly Important	Moderately Important	Very Important	Extremely Important
Asking higher order thinking questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Priming of challenging patterns in the repertoire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Breaking sections of repertoire into small chunks for mastery and then connect the chunks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Selecting repertoire just beyond the current ability of the student while helping the student learn the skills necessary to successfully perform the repertoire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having a student perform the entire song without interruption during a voice lesson even if he makes errors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing high-quality, specific feedback throughout the lesson,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

including praise for successes and redirection for errors						
Teaching a student to be aware of what she is thinking about her singing while she is singing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching deliberate practice strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing high- quality models and/or demonstrations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setting goals collaboratively with a student	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Importance Matrix

Start of Block: Additional Strategies

What additional strategies, besides the ones mentioned in a previous question, do you consider to be important tools for teaching singing?

End of Block: Additional Strategies

Start of Block: Demographic Information

Please provide the following demographic information about yourself and your institution. This information will only be used for data analysis.

What do you consider your PRIMARY teaching role?

- ☐ Voice Teacher
☐ Choir Director
☐ Music Educator
☐ Opera Director
☐ Other _____

What do you consider your SECONDARY teaching role(s)? (Select all that apply.)

- ☐ Voice Teacher
☐ Choir Director
☐ Music Educator
☐ Opera Director
☐ None
☐ Other _____

What type of undergraduate degree do you hold?

▼ BA - Music ... Other Non-music degree

BM – Music Performance
 BME or BA/BS in Music Education
 Other Music Specialization
 Other non-music degree

What is your highest level of education?

▼ Bachelor's ... Doctorate

Master's
Artist Diploma
Doctorate

How many years have you been teaching singing?

At what levels do you have teaching experience? (Select all that apply.)

- ☐ Pre-K
- ☐ K-6
- ☐ 6-8
- ☐ 9-12
- ☐ Undergraduate
- ☐ Graduate

In what state(s) do you currently teach? (Please use state abbreviations as your response.)

At what type of higher education institution do you currently teach?

▼ Public 4-year ... Other

Private 4-year
Community College
Other

End of Block: Demographic Information

Start of Block: Further Participation

This survey is the first component of a mixed-methods study. An explanatory qualitative phase, consisting of multiple case studies, will be conducted during November 2017 - February 2018. Qualitative data will be collected through interviews, teaching observations, and teaching artifacts.

Are willing to be contacted for further participation in the qualitative phase?

☐ Yes

☐ No

Display This Question:

If Further Participatio = Yes

Thank you for being willing to be contacted for further participation in this study.

Please provide the following contact information. It will only be seen and used by the researcher to communicate with potential participants for the qualitative phase of the study. No identifiable information will appear in any publication or presentation of the data.

☐ Name: _____

☐ Email Address: _____

End of Block: Further Participation

Start of Block: End Message

Thank you for taking the time to complete this questionnaire. Your consideration and assistance in the quantitative phase of this study is greatly appreciated. If you have any questions or concerns, please feel free to contact the principal investigator or faculty advisor using the information listed below.

Principal Investigator:
Susan E. Shirel, M.A.
D.A. Candidate
Ball State University
Muncie, IN 47306
Instructor of Music
Harding University
Searcy, AR 72149
seshirel@bsu.edu

Faculty Advisor:
Don P. Ester, Ph.D.
Professor of Music Education
Ball State University
Muncie, IN 47306
dester@bsu.edu

Please click the next button one final time to submit your survey.

End of Block: End Message

APPENDIX B

FACE VALIDITY TEST RESULTS

I. Instructions		Mean
Directions on how to fill out the questionnaire were clearly written and understandable		1.67
II. Teaching Strategy Questions		Mean
Question #1,2,3 Higher-Order Thinking	Question is clear/understandable	1.33
	Question is related to singing teaching strategies	2
Question #4,5,6 Priming	Question is clear/understandable	1.67
	Question is related to singing teaching strategies	1
Question #7,8,9 Chunking	Question is clear/understandable	1
	Question is related to singing teaching strategies	1
Question #10,11,12 ZPD	Question is clear/understandable	1.67
	Question is related to singing teaching strategies	1.33
Question #13,14,15 Student Performance	Question is clear/understandable	1
	Question is related to singing teaching strategies	1.33
Question #16,17,18 Feedback	Question is clear/understandable	1.67
	Question is related to singing teaching strategies	1
Question #19,20,21 Metacognition	Question is clear/understandable	1.67
	Question is related to singing teaching strategies	1
Question #22,23,24 Deliberate Practice	Question is clear/understandable	1
	Question is related to singing teaching strategies	1
Question #25,26,27 Modeling	Question is clear/understandable	1
	Question is related to singing teaching strategies	1
Question #28,29,30 Goal Setting	Question is clear/understandable	1
	Question is related to singing teaching strategies	1
Question #31 Additional Strategies	Question is clear/understandable	2
	Question is related to singing teaching strategies	1.33

III. Demographic Questions		Mean
Question #1,2 Teaching Roles	Question is clear/understandable	2
	Question is related to collegiate teachers of singing	1
Question #3,4 Degree Info	Question is clear/understandable	1.67
	Question is related to collegiate teachers of singing	1
Question #5,6 Teaching Experience	Question is clear/understandable	1.33
	Question is related to collegiate teachers of singing	1
Question #7 State	Question is clear/understandable	1
	Question is related to collegiate teachers of singing	1.67
Question #8 Institution Type	Question is clear/understandable	2
	Question is related to collegiate teachers of singing	1.33
Question #9 Further Participation Contact Info	Question is clear/understandable	1.33
	Question is related to collegiate teachers of singing	1
Grand Mean		1.31

1 = strongly agree; 2 = agree; 3 = disagree; 4 = strongly disagree

APPENDIX C

QUANTITATIVE IRB PROTOCOL APPROVAL LETTER



Office of Research Integrity
Institutional Review Board (IRB)
2000 University Avenue
Muncie, IN 47306-0155
Phone: 765-285-5070

DATE: August 21, 2017

TO: Susan Shirel

FROM: Ball State University IRB

RE: IRB protocol # 1106128-1

TITLE: Using Learning Theory-Based-Teaching Strategies for Teaching Singing: An Explanatory Sequential Study of Collegiate Teachers of Singing

SUBMISSION TYPE: New Project

ACTION: APPROVED

DECISION DATE: August 21, 2017

REVIEW TYPE: **EXEMPT**

The Institutional Review Board reviewed your protocol on August 21, 2017 and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

Exempt Categories:

X	Category 1: Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
X	Category 2: Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior
	Category 3: Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under category 2, if: (i) the human subjects are elected or appointed officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
	Category 4: Research involving the collection of study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or

	if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.
	Category 5: Research and demonstration projects which are conducted by or subject to the approval of Department or agency heads, and which are designed to study, evaluate or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in methods or levels of payment for benefits or services under these programs.
	Category 6: Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed which contains a food ingredient at or below the level and for a use found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

Editorial Notes:

1. Participant Signature Required on Informed Consent (Audio Recordings).

While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. **Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project.** Please contact (ORI Staff) if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (<http://www.bsu.edu/irb>) for review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

Reminder: Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.

Bryan Byers, PhD/Chair
Institutional Review Board

Christopher Mangelli, JD, MS, MEd, CIP/Director
Office of Research Integrity

APPENDIX D

INTERVIEW AND OBSERVATION CONSENT FORM

Study Title: Using Learning-Theory-Based Teaching Strategies for Teaching Singing:
An Explanatory Sequential Study of Collegiate Teachers of Singing

Study Purposes and Rationale:

The purpose of this study is to investigate the uses of learning-theory-based teaching strategies (LTBTS) by teachers of singing in colleges and universities for teaching singing. Literature regarding the applied music lesson setting explores characteristics of effective teaching, the teacher/student relationship, the self-efficacy of applied teachers, and the development of an evaluation tool for applied lessons; however, no research has yet examined the use of teaching strategies specifically identified as learning-theory-based for teaching singing. Limitations of the literature lie in the unknown applications in the voice studio, the focused attention on common characteristics, and the lack of research about the uses of LTBTS by voice teachers. The following research is intended to identify to what extent teachers of singing are knowledgeable about learning-theory-based teaching practices and how teachers of singing may already be using these strategies in order to be able to expand the knowledge base in research-based approaches of teaching singing and ultimately, increase student learning.

Inclusion/Exclusion Criteria:

To be eligible for participation, you must be an applied voice teacher or choral director currently teaching at a higher education institution in the United States and have completed the “Effective Teaching Strategies for Teaching Singing” questionnaire. Participants must be over the age of 18. Collegiate teachers of singing outside of the United States are not eligible.

Participation Procedures and Duration:

Participation will occur in three parts, occurring for 3-5 hours during the 2017-2018 school year.

1. An individual interview will be conducted with each participant using Skype or FaceTime. The semi-structured interview protocol will focus on establishing participant familiarity with LTBTS, what training and experiences each participant has in teaching singing, and how the participants use LTBTS for teaching singing.
2. Teaching materials, such as course syllabi, handouts, teaching notes, or primary teaching resources, will be solicited from participants.
3. Participants will be video recorded teaching two students, one lower level and one upper level, to observe how the participant may or may not be using LTBTS for teaching singing. Video recordings will be kept for one year and then deleted.

Data Confidentiality or Anonymity:

All data will be maintained as confidential and only accessible to the researcher. In an effort to protect the privacy of you and your school, no identifying information (other than the public or private status) such as names will appear in any publication or presentation of the data.

Storage of Data:

The data will be entered into a software program and stored on the researcher’s password-protected computer for one year and then deleted. Only members of the research team will have access to the data.

Risks or Discomforts:

There are no anticipated risks.

Benefits:

There are no direct benefits to participating in this survey. However, some participants may enjoy and possibly benefit from self-reflection and discussion about their teaching practices.

Voluntary Participation:

Your participation in this study is completely voluntary and you are free to withdraw your permission at anytime for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before starting the survey and at any time during the study.

IRB Contact Information

For questions about your rights as a research subject, please contact the Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070 or at irb@bsu.edu.

Study Title: Using Learning-Theory-Based Teaching Strategies for Teaching Singing:
An Explanatory Sequential Study of Collegiate Teachers of Singing

Consent

I, _____, agree to participate in this research project entitled, *Using Learning-Theory-Based Teaching Strategies for Teaching Singing: An Explanatory Sequential Study of Collegiate Teachers of Singing*. I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my consent to participate. I understand that I will receive a copy of this informed consent form to keep for future reference.

To the best of my knowledge, I meet the inclusion/exclusion criteria for participation (described on the previous page) in this study.

My signature documents my permission to take part in this research including audio and video recording during interviews and lesson observations.

Signature of Participant

Date

Printed Name of Participant

Signature of Person Obtaining Consent

Date

Printed Name of Person Obtaining Consent

Researcher Contact Information

Principal Investigator:
Susan E. Shirel, M.A.
D.A. Candidate
Ball State University
Muncie, IN 47306
Instructor of Music
Harding University
Searcy, AR 72149
seshirel@bsu.edu

Faculty Advisor:
Don P. Ester, Ph.D.
Professor of Music Education
Ball State University
Muncie, IN 47306
dester@bsu.edu

APPENDIX E

QUALITATIVE SEMI-STRUCTURED INTERVIEW PROTOCOL

Background and Influences Inquiry (Pre-Observation Interview – to be approx. 45 minutes)

1. Describe the training you received in teaching voice.
 - a. From where do you hold degrees and what type of degrees are they?
 - b. If you took a vocal pedagogy course(s) as part of a degree, what was the focus of that course(s)? What texts and supplemental texts were used?
 - c. If you teach (or have taught) a vocal pedagogy course, what is the focus of the content covered? What texts and supplemental texts are used?
2. Who have been the biggest influences on the development of the teaching strategies you use in the voice studio?
3. What experiences have been the biggest influences on the development of the teaching strategies you use in the voice studio?
4. Describe a “typical” voice lesson with a student in your voice studio. What three adjectives best describe your voice teaching?
5. How do you define “Learning-Theory-Based Teaching Strategies?”

LTBTS Inquiry (Post-Observation Interview – to be approx. 1 hour)

1. What experiences do you have with the educational learning theories of behaviorism, cognitivism, and constructivism?
 - a. In what ways can behaviorism, cognitivism, and/or constructivism be applied to voice teaching?
2. How have you experienced (and/or deliberately taught) using _____ in a voice lesson?
 - a. Higher and lower order thinking questions (based on Bloom’s Taxonomy)
 - b. the Zone of Proximal Development (Vygotsky)
 - c. Priming
 - d. Metacognition
 - e. Any of the following strategies: Chunking & chaining; using a full performance in a lesson without interruption; providing feedback; teaching deliberate practice; using modeling; and collaborative goal setting.

Additional questions will include clarification of teaching strategies observed during participant teaching observations.

APPENDIX F

QUALITATIVE IRB PROTOCOL APPROVAL LETTER



Office of Research Integrity
Institutional Review Board (IRB)
2000 University Avenue
Muncie, IN 47306-0155
Phone: 765-285-5070

DATE: November 20, 2017

TO: Susan Shirel

FROM: Ball State University IRB

RE: IRB protocol # 1106128-2

TITLE: Using Learning Theory-Based-Teaching Strategies for Teaching Singing: An Explanatory Sequential Study of Collegiate Teachers of Singing

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED

DECISION DATE: November 20, 2017

REVIEW TYPE: **EXEMPT**

The Institutional Review Board reviewed your protocol on November 20, 2017 and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

Exempt Categories:

	Category 1: Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.
	Category 2: Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior
	Category 3: Research involving the use of educational test (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under category 2, if: (i) the human subjects are elected or appointed officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.
	Category 4: Research involving the collection of study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or

	if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.
	Category 5: Research and demonstration projects which are conducted by or subject to the approval of Department or agency heads, and which are designed to study, evaluate or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in methods or levels of payment for benefits or services under these programs.
	Category 6: Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed which contains a food ingredient at or below the level and for a use found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

Editorial Notes:

1. Modification Approved
2. Participant Signature Required on the Informed Consent (Video Recordings).

While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. **Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project.** Please contact (ORI Staff) if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (<http://www.bsu.edu/irb>) for review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

Reminder: Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.

D. Clark Dickin, PhD/Chair
Institutional Review Board

Christopher Mangelli, JD, MS, MEd, CIP/
Director
Office of Research Integrity

APPENDIX G

PARTICIPANT C: SONG STUDY AND CHARACTER STUDY ASSIGNMENTS

Song Study

1. Title:
2. Composer:
3. Composer dates:
4. Larger work:
5. Date written:
6. Poet/librettist:
7. Notable information about this piece:
8. Key:
9. Tempo:
10. Meter:
10. Dynamic changes:
11. Form:

Character Study

1. Name of your character:
2. Relationship to bigger work (are you main character, relative, nemesis, love):
3. To whom are you singing:
4. About what are you singing:
5. What is your environment like:
6. What happened prior to your song:
7. What will be the result of singing this:
8. What will you do to express this information:
9. What emotions are expressed with this piece:
10. How does the music express these emotions:
11. Is there any action in the character:
12. What is the age:

APPENDIX H

PARTICIPANT C: HOW TO PREPARE A SONG FOR A VOICE LESSON

How To Prepare A Song For A Voice Lesson

Step 1: One Hour- **Preliminary read-through at the piano.** Play as much of the accompaniment as your piano skill allows. Use the pedal and play gently—tantalize your ear, don't bang notes at yourself. (This is very important in your first impression of a song.) Play your line alone, carefully getting all the rhythms correct. Check also what the piano does when you are not singing. **DON'T START SINGING YET**; or you will learn mistakes that will be hard to unlearn later.

Step 2: One-Two Hours- **Translate your song word for word and write out IPA transcription.** Look up words in the dictionary first and then use other word for word translations as reference. Write out your translations, not in the music but on a separate sheet of paper. Research your piece. Who wrote it? Why did they write it? When it was written? Is it part of a larger work, series, or collection?

Step 3: One Hour- **Memorize the translation of every word.** These two translation steps cannot be skipped. They are the groundwork of your learning. **For songs in English, memorize the poem.**

Step 4: 1/2 Hour- **Speak the words in rhythm**, each phrase 5 times. You should find that you have the words and rhythms from memory by now.

Step 5: 1/2 Hour- Several times- **sing each phrase** on only the vowels 4 times, then with the consonants 2 times. Note the composer's dynamics. This step should be repeated on several successive days, and should lead of course to your singing the entire song from memory. At this step more piano work will be called for as well by playing your line and checking harmonies in the accompaniment.

NOTE that the first four steps are non-singing steps!!! Let the singing come as a reward to yourself for doing your ground-work.

These five steps represent a MINIMUM of six hours of work, **which should be done before bringing a song to a lesson for the first time.** It consists of only the basics, only the scaffolding upon which to build. The song should then begin to grow for you, as you react to the poem and study its style and content. Work on diction and pronunciation, in both English and foreign language songs; and analyze the music more closely- harmonic modulations, dynamic markings, style, etc. I will help you in this area and of course guide you in solving any vocal problems in the song.